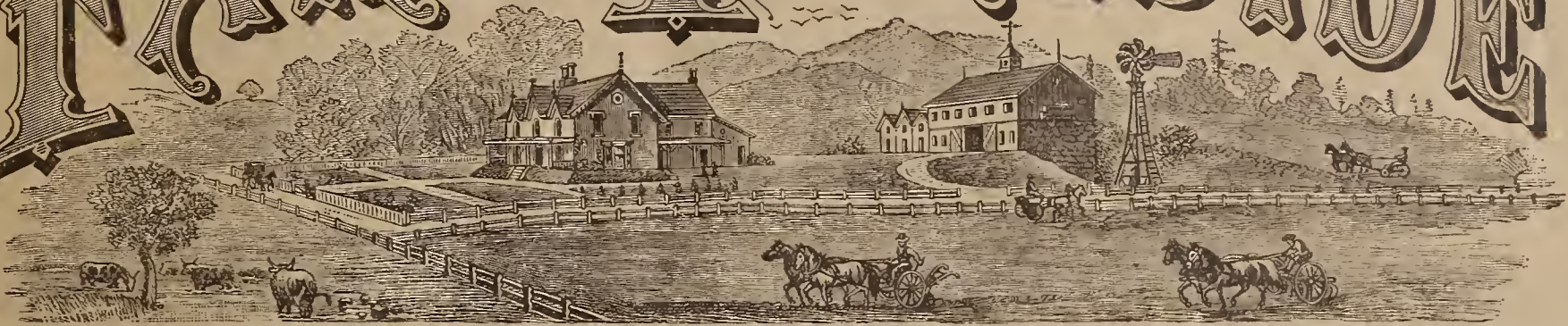


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# FARM & FIRESIDE



EASTERN EDITION.

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24 NUMBERS.



SILAS A. HOLCOMB, Governor of Nebraska.

Governor Holcomb writes "Farm and Fireside."

"Crop prospects are unquestionably bright. Oats and wheat are about harvested, the former being in places somewhat lighter than the crop of last year, and the latter being almost, if not quite, as good as the crop of 1897, which was the largest yield in the history of the state. The corn crop has undoubtedly suffered somewhat in the past three weeks, but recent rains have put a check on further damage along that line. Trade conditions are as good, if not better, than in any previous year."

This will be "another farmer year." Bountiful crops lead to plenty of money, and advertisers who know how to "strike when the iron is hot" will appreciate the present opportunity when the farmer is able to buy what he has been going without for years. All the large mail-order houses are planning to use more space than ever, and "Farm and Fireside," the greatest agricultural journal in America, is the one which will be selected for the largest booming, because it invariably pays.

Let us talk it over.

**Circulation First 8 Months of '98**  
**Over 331,000 Copies Per Issue.**

## WITH THE VANGUARD

If the Cubans heed the counsels of their own chosen leaders, the problem of establishing a stable, independent government in Cuba will be solved without great difficulty. In an address to the insurgent army, President Maso of the provisional republic says:

"The United States of North America, from the moment the cry of February 24th was given, rose alarmed, casting its eyes across the small sea which separates us toward this bloody and agitated land. Moved by our convulsions, the United States could not continue to live the pleasant life which their prosperity guarantees them, and which other countries, indifferent to our misfortunes, have continued to live.

"The United States gave in their cities hospitality to our people; in their manufactories our rifles were made; from their shores came numerous expeditions; their press, with immense and constant clamor, called for justice, praising our triumphs, publishing our sufferings, encouraging us with their sympathy and promise of help, while it protested against and condemned the atrocities of Spain. American diplomacy drove the infamous Weyler out and terminated the criminal policy of concentration; the United States have continued their great work of humanity and justice, sacrificing their own peace, offering their own treasure and giving their own noble blood, constituting itself the executioner of their verdict by which the empire of Spain is

forever extinguished in the Antilles and Cuba becomes sovereign in the enjoyment of her independence.

"Every Cuban heart, therefore, instead of bitterness and sorrow, must be proud of having done its duty and grateful to its protector. . . .

"The American people, our ally of yesterday, our host of to-day, our friend always, is contemplating Cuba and will witness our constitution. Let Cuba be worthy of herself and she will be worthy of the friendship of the United States. The Cuban army will do its part; it has fought under the motto embodying our ideals—country and liberty. We have at last a country, and will deserve liberty.

"Our love for Cuba will cause us to have little trouble in establishing a calm present, harbinger of a prosperous future. Neither interest nor hatred were the motives which impelled us to this war. No one who gives up his home and suffers hardships and misery is capable of such baseness. The Cuban flag, so gallantly defended and stainless, will not be in the hour of peace soiled with crime, or violence, or revenge. The good judgment and magnanimity of the Cubans will gain for them the admiration of the world. They will deserve a place in history, for they will have seen their work accomplished and their country redeemed and triumphant."

UNDER date of September 10th, "Bradstreet's" comments on the movement of prices as follows:

"Perhaps no feature of the prices situation is more interesting than the gradual gain in strength which has been shown for a long time past. Without any particularly marked advances in any one class of staples there has been shown a steady accession to the strength of values which has brought prices, in spite of the cheapening of production which has been such a feature of the past few years, up to the level they reached before the effects of the panic of 1893 and the following dullness and depression had begun to exercise a marked influence. Examination of "Bradstreet's" prices index numbers shows that the general level of all values, as indicated by nearly one hundred staple articles, is now higher than at any preceding date since January 1, 1894, a year which, it will be recalled, marked low-water in a great many lines of business, though a lower range of values was reached in succeeding years. The general index number on September 1, 1898, was 76,860, a slight gain over that of August 1, 1898, which was 76,556, and marks a progressive and steady gain over all preceding periods, as above stated, for more than four years past.

"The general result of the movement of prices in August and preceding periods is approximately summed up in the following table of index numbers:

"BRADSTREET'S" PRICES INDEX NUMBERS.			
Oct. 1, 1890.....	105,996	April 1, 1896.....	66,191
Jan. 1, 1891.....	94,236	July 1, 1896.....	65,952
April 1, 1891.....	96,900	Oct. 1, 1896.....	56,803
July 1, 1891.....	91,633	Jan. 1, 1897.....	69,364
Oct. 1, 1891.....	88,826	April 1, 1897.....	63,760
Jan. 1, 1892.....	87,782	May 1, 1897.....	68,063
April 1, 1892.....	86,676	June 1, 1897.....	66,648
July 1, 1892.....	80,629	July 1, 1897.....	66,937
Oct. 1, 1892.....	82,889	Aug. 1, 1897.....	69,217
Jan. 1, 1893.....	85,217	Sept. 1, 1897.....	71,937
April 1, 1893.....	95,995	Oct. 1, 1897.....	73,277
July 1, 1893.....	79,369	Nov. 1, 1897.....	73,265
Oct. 1, 1893.....	78,617	Dec. 1, 1897.....	73,527
Jan. 1, 1894.....	75,991	Jan. 1, 1898.....	74,184
April 1, 1894.....	73,160	Feb. 1, 1898.....	74,196
July 1, 1894.....	72,270	Mar. 1, 1898.....	75,243
Oct. 1, 1894.....	72,366	April 1, 1898.....	75,586
Jan. 1, 1895.....	75,570	May 1, 1898.....	74,666
April 1, 1895.....	66,872	June 1, 1898.....	74,885
July 1, 1895.....	71,304	July 1, 1898.....	75,570
Oct. 1, 1895.....	72,941	Aug. 1, 1898.....	76,596
Jan. 1, 1896.....	70,576	Sept. 1, 1898.....	76,860

"Compared with September 1st one year ago the movement of prices is an encouraging one, notwithstanding the high level reached last fall by breadstuffs, cotton and some makes of iron and steel. Of one hundred and five staples fifty-five, or more than one half, are higher than they were a year ago at this time, and among these might be mentioned oats and barley among cereals, live beeves, sheep and horses and most of their products, nearly all raw textiles, except cotton, a number of grades of iron and steel, crude and refined petroleum and a number of miscellaneous articles. Wheat, corn, rye and flour are lower

than they were a year ago at this time, as are also eastern pig-iron, steel rails and tin-plates; anthracite and bituminous coal and southern coke are also lower, but apples and lemons among fruits, brick, nails, glass and pine lumber among building materials, and hops, rubber and paper in the list of miscellaneous products are all selling higher than one year ago. The like is true also of a number of provisions and groceries, among which might be mentioned beef, mutton, milk, lard, butter, sugar, tea, salt and rice. The influences of last season's immense cotton crop and of another possible large yield are reflected in the lower prices of raw cotton and its various manufactured products."

BEERBOHM'S London List estimates the world's wheat crop of 1898 at about 2,620,000,000 bushels. The highest previous record is 2,562,000,000 bushels in 1894, which is 58,000,000 bushels less than the estimate for this year. However, the wheat reserves of this year are considered to be 320,000,000 bushels smaller than in 1894. The aggregate supply of wheat this year is, therefore, with the 58,000,000 bushels larger production, 262,000,000 less than in 1894.

In a recent review of the grain trade and crops the Cincinnati "Price Current" says:

"The large production of wheat in this country, and rather full promise for other portions of the world's crop, continue to dominate trading and to practically cut off consideration of the low position of reserves upon which the new crop begins to move. Briefly stated, the position is one in which the world's crop promises to equal, and probably exceed, the largest previous production, while the aggregate of production and reserves falls decidedly below a similar reckoning of previous conditions. As a London authority well remarks, the existing situation properly understood furnishes a tangible reason why a return to the low prices of 1894-95 ought not to be feared."

This, then, is the wheat situation in a nutshell—the largest world's crop ever grown, but with an unusually small reserve carried over from previous crops, making a total supply that is not above the world's needs. The situation warrants better prices than now prevail, but no one can foretell when they will be better. The farmer who holds wheat for an advance in price is apparently justified by what is known of the world's supply and demand, but there is no one who can tell him beforehand how long he must wait before the price rises to its proper level.

THE crop correspondence of both trade and agricultural journals indicate a light crop of clover-seed this season. While fair yields have been obtained in a few sections, the crop is nearly a failure in others. The low prices that have prevailed so long have probably had the effect of materially reducing the acreage harvested this year. Taking this into consideration with the light yields reported, the total crop is likely to fall considerably below the average, and a marked rise in price may be expected.

AT the Columbus meeting of the Ohio wool-growers' association, September 1st, the following resolution was unanimously adopted:

"Whereas, The average price of American wools in the Philadelphia and other eastern markets is four and one tenth cents a pound below the price at which similar wools can be imported, plus the duty, which shows the existence of a combination of manufacturers to procure domestic wools at less than a fair price, therefore

"Resolved, That we urge a sufficient number of the wool-dealers in our principal wool markets to organize a league to receive consignments of all American wools and to advance money thereon to wool-growers and local wool-buyers, and hold the same for sale, in no case less than its fair value. And local wool-dealers are urged to ship wool only to eastern dealers who are in the league, and wool-growers are urged to ship wool only to members of the league, or to sell to local wool-dealers who co-operate with the league. And we urge that only known friends of adequate protection for the wool industry be admitted to the league, and that wool-importers shall be excluded therefrom."

# FARM AND FIRESIDE

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**Postage-stamps** will be received in payment for subscriptions in sums less than one dollar, if for every 25 cents in stamps you add one-cent stamp extra, because we must sell postage-stamps at a loss.

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## The Advertisers in This Paper.

We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties: if subscribers find any of them to be otherwise we should be glad to know it. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.

## ABOUT RURAL AFFAIRS.

**Tissue-paper for Wrapping Fruits.** I have spoken about this subject several times, but consider it of so much importance that I am moved to quote from the remarks made by Mr. H. E. VanDeman, at the last meeting of the Michigan fruit-growers, as follows: "There is nothing very mysterious about the success of the California fruit-growers. In the first place, they take pains to produce high-grade fruit; then they fix it up in the nicest packages they can devise, and wrap every pear, every peach, every fruit, except cherries, in tissue-paper, some even having their brand printed on the tissue-paper. And this fruit they send here, and with it capture the fancy market. The way to beat California is to beat her at her own game. If it pays them to buy tissue-paper and wrap their fruits it will pay you. It won't cost very much to send a box or two to market and see the difference in price. I don't care if you charge double price for the tissue-paper and wrapping, and so on. Charge everything to the expense of the venture that you like, that your conscience will permit, and then make an estimate after you are all through. I tell you, solemnly, it will pay. One man said he cleared a dollar a barrel above all expenses on every barrel of pears that he wrapped, without difference in quality. Fruit which is wrapped is of better quality. The wrapping retains the flavor. Why do the Florida people wrap their oranges? They wrap oranges with skins as thick as sole-leather because it retains the aroma. With a pear the longer that fragrance escapes the poorer it is. The peach, pear or plum that is wrapped is better than if not wrapped."

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**For the Home Grower.** I wish to emphasize this advice for the especial benefit of the home grower. For the sake of the enjoyment of home comforts we can well afford to take special pains in putting up full supplies of the the choicest fruits and vegetables. The necessary amount of tissue-paper can be had at small cost at the nearest paper-store. A few pounds will go a great ways. Select some of your very best apples, pears, and perhaps some tomatoes (of course, at the proper time, which is before these products

are fully ripe), and wrap each carefully in a piece of the tissue-paper, and then pack into suitable packages, the half of barrel-kegs being best. Head up properly and store in as cool a place safe from freezing as you have. In this way you can have the best of these soil products for a long time, and enjoy your opportunities to the fullest practicable extent.

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## The Matter

### of Spraying.

Once more I have used the Bordeaux mixture freely and persistently on my potatoes. Paris green addition was effective in every instance, and made short work of the potato-bugs. But I am sorry to say that the treatment does not seem to be any more effective in keeping off the blight than I found it in former years. With me the blight seems pretty sure to strike all early planted potatoes, and I cannot save them from this enemy, no matter what I do. I always make the mixture fresh for each application, and I am sure I know how to make it properly. The blight that I am talking about, and which gives me the most trouble, is what is usually known as "the early blight." As a rule it attacks the plants about the time that the tubers begin to set, and it runs its course, ruining the plants long before the tubers have reached their full size. While I can see but little effect from spraying the Bordeaux mixture on potatoes, I do not deny that it helps to keep tree foliage in good health and thrift. My Bartlett pears heretofore have been very little affected by scab, and I have considered it safe enough to dispense with spraying for this disease in the case of pears. This year, however, I missed it. My Bartlett trees were badly affected with scab, and I might have saved one hundred dollars clear money if I had sprayed the orchard a few times in spring and summer. Hereafter I shall spray pear-trees as well as apple-trees.

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## Repairing Spray-pumps.

I find that spraying machinery requires the best of care at all times, and even when that is given, frequent repairing besides. During hot and dry summer days the barrels of the barrel-sprayer dries out quickly and will become leaky if left standing outdoors empty; or if left filled portions of the pump or the nozzles will get rusty. Another weak part of these machines is the rubber hose, which soon gives out and becomes leaky. It needs frequent removal, or at least frequent readjustment. The portions near the joints and where fastened (with wire) to pump and to nozzles soon break and give out. The hose should be taken off in such cases, the few inches of damaged hose cut off, and the new sound end wired on again.

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Occasionally I have had trouble with the portion of the pump that is inside the barrel. The joints may come apart, or the screen at the end of the suction-pipe gets clogged up, etc., and the only way to get at it is to unloosen the bolts and take the whole pump out of the barrel. This is always an inconvenient task, and for this reason I think the idea of making the barrel-head movable (which idea I found in a recent issue of the "Rural New Yorker") is a most excellent one. After this I shall surely fasten the pump of my sprayer to a movable head, as shown in accompanying illustration. The "Rural New Yorker" says: "The head is secured by three bolts that are fastened to the inside of the barrel. This arrangement has great advantages when it becomes necessary to repair the pump. With the old way the pump can be got at only through the small hole in the top of the barrel, and every one knows how disagreeable that is, or else the pump must be taken from the barrel at the expense of much time and patience in removing numerous rusty screws and bolts. With the removable head it is but a minute's work to remove the pump, and it is as easily replaced when the repairs have been made."

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## Pickles for Dyspeptics.

The American people have a great fondness for pickles of all kinds, and consume great quantities of them. The

pickles are mostly what are called "vinegar pickles," and in many cases, when made with poor vinegar, greatly injure already impaired digestive powers. My favorite pickles are the so-called "dill" pickles, which are found on sale at the groceries in Buffalo and other large cities that have a large population of Germans. I like these pickles (home-made) because I find them not only palatable, but also easily digested. The "New York Farmer" calls them "pickles for dyspeptics." My way of making them is as follows: I use a large stone crock or a barrel, keg or wooden tub. A layer of grape-leaves, well washed, is placed in the bottom, and upon this a layer of washed cucumbers, side by side. Next comes another layer of grape-leaves, and if I have them, some dill-plants; then another layer of cucumbers, and so on until the crock or tub is full, leaving a layer of grape-leaves on top. Now I fill the crock up with brine (about strong enough to float an egg) and hold the pickles under the brine by means of a plate or wooden cover weighted with a cleanly washed stone. Of course, a well-fitting cover should be put over the top of the crock or tub. Set in a warm place if you want the pickles to get sour quickly. After awhile they may be removed to a cool place. I keep mine in the cellar. The natural fermentation of the grape-leaves and brine makes the pickles sour enough to use without vinegar. Dill-seed can be had from any seedsman, and the plants grow as easily as weeds; in fact, if you plant them once, and do not use all the plants, so that some of them will ripen their seed, you will have plants spring up in your garden year after year.

T. GREINER.

## SALIENT FARM NOTES.

### Corn, Clover

### and Hogs.

Not long ago I called at the home of an acquaintance whose specialties are corn and hogs. His farm is devoted chiefly to the production of these two crops, and he manages them so well that he has not failed to grow at least a fair crop of corn in fifteen years, while he has not lost a pig by cholera or swine-plague since he lived on the farm. His farm is well surface-drained, and, where needed, thoroughly tile-drained. This enables him to plow, plant and cultivate when most of his neighbors cannot get on their land with a team. He fertilizes with clover, pasturing his pigs on the clover while it produces the material to enrich the soil. One hundred to one hundred and fifty pigs feeding in a sixty-acre field of clover make scarcely any impression on it, while they grow and thrive in a remarkable manner.

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He sows clover-seed with oats, a heavy seeding of clover and a very light seeding of oats, and as soon as the oats begin to head the pigs go into the field and remain there until winter. He keeps his corn-field clear of weeds, and consequently has no trouble with weeds in the clover. Only once in fifteen years has he failed to secure a good clover crop; and then the stand was good enough, but a drought extending from July 6th to the last of October killed most of the plants. After clover he grows two crops of corn, then returns the land to clover again. His average yield of corn for twelve years has been sixty-three bushels to the acre. He says he is satisfied that, counting five years back and five to come, the yield will average seventy bushels to the acre. This is due to the fact that he now has his land in such a condition that it will produce maximum crops, and he bases his estimate on the average yield for the past five years.

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His pigs are farrowed in a large shed, where the sows are kept in movable pens a few days before and after farrowing, then all run at large in a five-acre orchard until the oats in the clover-field are heading, when they are turned into that. The principal part of their food during the summer is clover, but they are given a feed of corn every evening, just what they will eat up clean. They are provided with an abundance of pure water in a long trough so protected by a plank cover that they can get in only their noses. This trough stands on a plank platform, and all waste-water flows outside the field. If a wallow is started in any part of the field it is promptly filled with hedge-brush. He thinks that an abundance of green food and pure water, with a strict quarantine against other hogs, hog-buyers and men coming from cholera-

infected farms, has prevented losses from disease.

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His sows are in good condition when they farrow, and the pigs come strong and vigorous, and all are well cared for until they go to market. Under his system of management they reach from one hundred and ninety to two hundred and thirty pounds at six months of age. The combination feed of clover and corn makes them fine, smooth, even animals, with flesh as firm as those strictly corn-fed, and they bring the highest prices paid for pigs of their class. All are disposed of soon after they reach the two-hundred-pound mark, as, he declares, the next one hundred pounds put on them would cost not less than a third more than the first two hundred, while the price received for them would average a cent less to the pound.

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I asked him if he could tell me very nearly what it cost a pound to raise pigs under his system, and he admitted with some reluctance that he could not because he had never reduced the matter to dollars and cents. He said that he was satisfied, however, that they obtained half their growth from the crop that was grown especially to fertilize the land, and as that crop was practically uninjured by them, of course that half might be said to cost nothing. He says that experience has taught him that unless the pigs are given one full feed of corn every day while they are on grass their growth is not satisfactory, and more corn and longer time is required in the fall to take them safely out of the "grasser" class. The quality of the pork made from this clover-corn feed is excellent in every respect, being of the streak-of-fat-and-streak-of-lean order so much sought for by those who desire quality rather than quantity, especially if that quantity is chiefly made up of grease.

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It is hardly possible for all farmers to adopt this man's plan of growing a crop of fertilizer and pigs in the same field, yet there are thousands who might adopt it with profit to themselves and great benefit to their land. Thousands could adopt a rotation of corn and clover, with pigs as a leading factor, and in ten years find themselves richer and their land vastly more fertile and valuable than by following their present plan of planting every foot to corn, wheat or oats and extracting every atom of fertility out of the soil that it will yield up. Probably at least half of those who should attempt to follow such a rotation would at the outset overstock the clover-field and ruin the crop. To see a few pigs wading about in a large field of thick, heavy clover would give some men the fidgets. It would look like a great waste of valuable feed, and they would want to add a few more pigs or bring in a bunch of calves to "save the crop." If they should do this, in all probability they would have bare ground to plow over in the fall, and pigs that "don't look right," and they would at once declare the plan a miserable failure.

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Said a neighbor of my acquaintance, "Yes, I guess S. is making some money out of his corn, clover and pig scheme, but it looks like foolishness to run a lot of pigs deep in clover all summer when they can't eat half of it. You see he does that two summers, and then late in the second autumn turns under a great mat of stuff that would have fattened a nice bunch of cattle!"

FRED GRUNDY.

## WHITEWASHING.

In many sections of the country, particularly in the South and in the East, it is the custom to use whitewash very freely. Barns, cellars, fences, trees and even houses are treated to periodical brushings. Since a good deal of time is usually consumed in the ordinary method of application by brush, a quicker method would be welcomed by those that have the apparatus—a spraying outfit. The whitewash is made in the usual way, and carefully strained and diluted until it resembles thin cream. When a neat job is desired, such as whitewashing a fence or a cellar, the McGowan nozzle will be found very satisfactory, but for such rough work as the application of shading to greenhouse roofs the Boss or other direct-delivery nozzle will answer very well.

M. G. KAINS.

## Our Farm.

### FARM THEORY AND PRACTICE.

**PLAN TO UNDERDRAIN.**—Autumn is the time to prepare for tiling land that needs it. The work should be done when the ground is soft, and spring is not a good time usually, for several reasons. I prefer putting in tile when the land is in sod and ready to be broken for a spring crop. The work can then be done without any interference with a crop, and the investment brings immediate returns in the succeeding crop. Fall is the time for drawing tile, while roads are good and fields are not soft for wagon-wheels. Unless there is a considerable natural fall to the land a surveyor should be employed to get levels and make plat of underdrains. He will set pegs at each one-hundred-foot station along main line and all laterals, with witness stakes showing the number of each station. When the ground has been thoroughly soaked by fall rains a furrow should be cut by a large breaking-plow on the line of each underdrain. The plow should be run a few inches on one side of the pegs, as they must not be disturbed until the tile has been laid. The plow that is used should cut a clean, deep furrow. The tile may be distributed along the lines of drains as fast as drawn from car or factory, and for convenience should be placed in small piles. A small bunch of straw should be placed under each pile if there is any chance that the underdrains will not be finished before hard freezing weather, as the tile should not lie in water or on wet ground during freezes. The work is then in such shape that it may be left for otherwise idle time in the winter, as the ground in the bottom of the furrows does not freeze hard in ordinary winter weather. When spring comes the drains are at work drawing off all surplus water, the ground can be broken early for a crop, the soil warms up quickly because the dead water has been removed, and there is no tramping of wet ground, as is the case when the work of tiling is delayed until spring.

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**SOME DETAILS ABOUT THE WORK.**—Many fields are left undrained through a false impression that no outlet for drainage can be secured. In the case of such flat lands the surveyor's level should be used, unless there is absolute knowledge that no possible outlet can be secured. The eye cannot detect a difference in levels of one inch in one hundred feet, and yet that fall will do for mains constructed with large tile. Oftentimes the water from a swale or flat piece of land can be carried through a ridge to a swale a few inches lower on the other side, and then on to an outlet. The level tells exactly what can be done, and from the data gotten with it the cost of an outlet can be accurately computed.

I like a fall of three inches to the hundred feet, for small laterals, and more fall is still better, but a fall of two inches does nicely when the tile is laid accurately. As I have said, large tile may be laid with even less fall, if more cannot be had.

The grading can be done correctly when strings are properly used. A small pole should be stuck into the ground by the side of one of the pegs, and another pole on the other side of the proposed drain. A white string should then be drawn across the space between the poles and five and one half feet above the bottom of the proposed trench. The figures are obtained from the surveyor's plat. At each hundred-foot station similar sticks and strings should be put in place. It then results that these

the strings across the ditch. Every foot of the drain is thus tested, and the bottom of the drain is on a line as true as the strings that were set by the surveyor's figures.

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**SIZE OF TILE.**—In clay ground the underdrains should not be more than forty feet apart, and for such laterals I prefer two and one half or three inch tile. In more open soils the distance between laterals may be made much greater, and the tile should be correspondingly larger. Ordinarily, three-inch tile is large enough for laterals. The size of the main and sub-mains depends upon the area to be drained, and especially upon the amount of fall in the drains. No rule for size of mains can be accurate.

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**CLOSE JOINTS.**—The tile cannot be laid with too much care. The joints should be close, especially at the top. In grading the drains for small tile a grading-shovel should be used that leaves a groove in bottom for the tile. This groove holds the tile in line until covered. When laying it is usually necessary to turn each piece until a close joint is secured. The water should sink to the bottom of the drain and rise into the tile, as this keeps silt from entering freely. If the joints are as close at the top as they should be no covering of straw or paper is needed at all. The moist earth from the sides of the drain should be thrown directly upon the tile with a shovel, and after this soil has been settled by a rain the remaining work of filling can be done with a horse and plow.

The laterals should enter the mains near the top side, and the joint should be a neat one. No holes should be left so large that a body of water can rush in from the surface, carrying mud with it. Make a neat joint, and cover it carefully with broken pieces of tile.

The tile at outlet should be protected in a permanent manner. Rock or brick should be used around the mouth of the tile, and the mouth should then be screened to prevent the entrance of vermin. If the outlet is properly guarded, the joints good and the grade all right, nothing can interfere with the working of the underdrains, and they should not require any more attention for hundreds of years. DAVID.

### DO NOT KILL THEM.

#### CHAPTER II.

#### SYRPHUS-FLIES.

Besides the little beetles described in my last article there is a large family of flies, the Syrphidae, many of whose larvae feed upon plant-lice. This family is a very large one, and thus the habit of its different members vary considerably. One of them so closely resembles a honey-bee as to be almost indistinguishable from it. The larvae of these flies (*Eristalis tenax*) are the common rat-tailed maggots, which are found in putrid matter, and it was upon this that was founded the old "Bugonia" superstition of the ancients that bees came from maggots in dead animals, etc.

In another group of the family, the adult flies of which also quite closely resemble bees, the larvae are parasitic in the nests of honey and bumble bees, feeding upon their larvae.

But the larvae of possibly the most typical portion of the family embracing the genus *Syrphus* and its near allies are entirely predacious upon plant-lice. Rarely can a colony of plant-lice be found without some of these little scavengers hard after them.

The adult syrphus-flies are very striking insects, with their dark-green metallic

so like the color of the plant as to render them most difficult to recognize. The young larvae at once commence crawling over the plant in search of the plant-lice, and as soon as they come in contact with one it is firmly clasped by the small hooks until the juices are sucked from its body. In this manner very large numbers are destroyed, a single maggot having been known to devour as many as one hundred



FIG. 2.

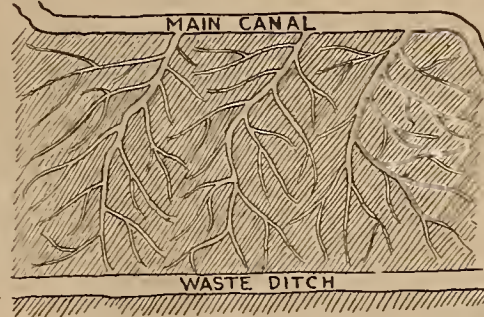
A Syrphus-fly—a, maggot; b, single segment of maggot, greatly enlarged; c, fly. (After Riley.)

lice in a single day. When the larva is ready to pupate it attaches itself to a leaf, and the larval skin merely dries up and forms a case, or puparium, inside of which the pupa remains until it transforms to the adult fly.

Though most of these larvae feed upon plant-lice on the leaves, one of them, the root-louse syrphus-fly (*Pipiza radicans*), lives entirely underground during that stage, and feeds upon the root-lice of the apple and the grape. None of this family are injurious, and as a large portion of them are so beneficial as to frequently destroy whole breeds of plant-lice, they should not be disturbed in their good work if possible to avoid it. E. DWIGHT SANDERSON.

### IRRIGATION BY FLOODING.

One of the most primitive systems of irrigation practised in ancient Egypt and modern America is that known as flooding. It is generally such inexpensive work and requires so little attention that the plan is frequently referred to as "the lazy man's method of irrigating." Many sections of the West are reclaimed from the native desert condition and converted into profitable orchards, pastures and meadows by wild-flooding, and the experiments at the Utah Agricultural College and elsewhere have demonstrated that check-flooding is the best system adapted to some peculiar soils. Flooding consists in covering the surface with water to the depth of three to six inches, and leaving it to penetrate to the subsoil by percolating through



IRRIGATION BY WILD-FLOODING.

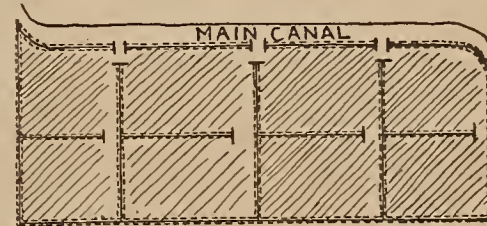
the cultivated strata. Its advantages are cheapness of application, complete submersion of surface-growing plants and enriching of the soil by depositing the silt carried by the water.

Wild-flooding is often used advantageously on gravelly soil, in irrigating a hillside planted to trees or permanent grasses. The main ditch is constructed on the highest plane, with a fall of four or more feet to the mile, and water is taken out into laterals at convenient points and distributed over the field. One furrow or lateral may be plowed through the plat to be irrigated, beginning with the main and ending in the waste ditch, and a sufficient distance from a parallel furrow to give plenty of room for the water to spread. When the furrows are made and the water turned in the ditches are closed a few yards from the main by earthen dams, and the water distributed in small streams on either side and left to spread over the surface. In most cases where hay-fields are irrigated by this system the ditches are left undisturbed for twenty-four hours, when the dams are cut and the water changed to a lower section of flood-ditches. In like manner the changes continue until the area is irrigated, the surplus water being caught in a waste-ditch and used elsewhere.

Check-flooding is adapted to level land and flat cultivation. It consists of miniature reservoirs, where the water is impounded about once a month to the depth of four or five inches, and absorbed by the soil for plant-food. The plats are surrounded by dams, or levees, about one foot in height, and a gate is opened at the highest point, through which the water enters and spreads over the surface, being held in

position by the check-walls. If water is turned in at night and let run until a volume equal to six inches in depth has been poured upon the cultivated field the entire lake will be drunk up by the following night and the subsurface reservoirs filled to that depth. This water, of course, supplies moisture to the plants while on the surface, and returns through capillary attraction when the soil is stirred by a plow or cultivator. In case of an unusual volume of water entering the gates and threatening to submerge plants that might be injured the dams may be cut at the lower corners and the water drained off into a waste-ditch.

Sometimes the contour of a field admits of a combining of wild and check flooding, thereby saving time and economizing on the use of water. A hillside planted to orchard, grain or pasture may be irrigated by wild-flooding, and the cultivated area lying directly below be supplied with moisture from the waste water of the upper field. In this case there is but little work for the farmer to do, only leave his head-gates open, so that the water will properly distribute itself. I am asked, "Can flooding be practised with good results in the East?" Yes; all systems of irrigation are good for the eastern states. The West has no copyright on irrigation or any of its methods,



IRRIGATION BY CHECK-FLOODING.

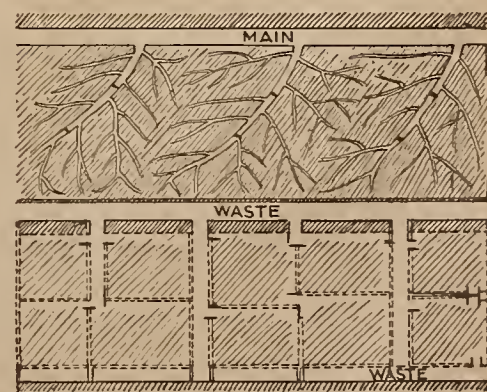
and certainly does not attempt to prohibit its adoption by every farmer in the land. JOEL SHOMAKER.

### KEEPING WINTER SQUASHES.

Many people who grow winter squashes complain that the fruit will not keep for any length of time after it is removed from the vines to the vegetable-cellar. The trouble may occasionally rest in the choice of varieties, but this is not usually the case, since the favorite late variety is still the old reliable Hubbard, a variety noted for its keeping qualities. Generally the fault rests with the man, who, occupied with other matters, lets his "hardy" vegetables lie in the field exposed to the frost long after they should be stored, and when he removes them, grumbles because these crops must be left until the weather is "most too cold to work out of doors."

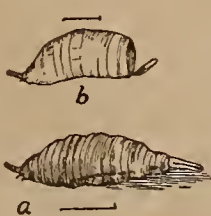
It is probably safe to say that a frost that will kill a melon, a pumpkin or a squash vine will also have some effect upon the fruit of that vine, especially if it be not fully mature. At any rate, experiment has proved that squashes and pumpkins removed from the vines before a vine-killing frost has touched them will keep better than those gathered after the plants have been killed, and that in many cases even the immature specimens so taken will, if not too young, keep better than riper specimens harvested the day following the freeze.

A good plan is to gather all the fruits and to put the unripe ones in a sunny spot where they can be covered at night and uncovered during the day. Here they may remain until the approach of very cold weather, when they may be removed to the cellar. When stored they should be



IRRIGATION BY WILD AND CHECK FLOODING.

given the warmest and driest corner, since, unlike other vegetables, they improve and ripen in the heat. If the house be heated by a furnace, the squashes may be stored around it. If immature, they will gradually ripen in such situations, even if not more than half grown when gathered. By using the ripest specimens first, the season of squash consumption may be lengthened. M. G. KAINS.

FIG. 1.  
Syrphus ribesii. (Original.)FIG. 3.  
The Root-louse Syrphus-fly (*Pipiza radicans*)—a, maggot; b, puparium; c, fly. (After Riley.)

strings are in exact line, all being just five and one half feet above the bottom of the desired trench in which the tile are to be placed. While digging the trench use a pole that is five and one half feet long, to determine the correct depth between stations and at every point along the bottom. Having one end of the pole on the bottom of the trench when graded, the top of the pole will, of course, be in exact line with

thorax, and abdomen variously branded with yellow and black. The female fly lays her eggs upon some plant bearing plant-lice. The larvae which hatch from these are cylindrical maggots, about one half of an inch long, with no trace of a head, but with four small hooks, which serve as jaws, projecting from the more pointed end of the body. These maggots are generally of a light green color, and often are

## Our Farm.

### NOTES FROM GARDEN AND FIELD.

**THE BEST ONION.**—"What do you consider the best onion?" is a question often addressed to me by correspondents and visitors. Some of the friends who come here imagine that I make a particular business and specialty of growing onions, and think that I must have acres of them. This is very far from the truth, for I have to grow so many things that I can only devote fractions of an acre to any one, with the exception of farm crops, such as grains, corn, perhaps potatoes, and some varieties of apples and pears. I grow more for experiment and knowledge than directly for money profit. For this reason I do not have many hundreds or thousands of bushels of onions to dispose of in the fall, or a lot to winter over, and for the same reason I grow the variety or varieties that I can sell most readily in the summer and early fall without much regard to their keeping qualities. If I grew onions by acres I would probably plant mostly or exclusively the Yellow Danvers, which is not only one of the best keepers, but also a good cropper and a handsome bulb of medium size. It is a good seller, too. For my purposes, however, I have a better onion in the Prizetaker, and a still better one in the Mammoth Gibraltar. Once or twice a week I send a big load of miscellaneous garden-stuff to the market in Niagara Falls, and I always try to have at least a few bushels of nice onions on the load during the early onion season. When I first began growing and marketing the Prizetaker people did not know anything about them and their good qualities, and they sometimes objected to them, at least as an onion for ordinary uses, on account of their large size. But soon they learned to appreciate the mild flavor of these large bulbs. Merchants bought the onions to retail by the pound, like the imported Spanish and Bermuda onions, and I have had no more trouble about selling them at prices far above what the same merchants would have been willing to allow for ordinary Yellow Danvers.

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**THE GIBRALTAR ONION.**—Then came the Gibraltar onion, still larger and, if anything, still milder than the Prizetaker. It was introduced about three years ago. This year, for the first time, I had the chance to obtain seed in full supply, and to plant the Gibraltar as largely as I did the Prizetaker. My crop of the former (the individual bulbs being so much larger) was also much larger than that of the Prizetaker; fortunately, for these big bulbs seem to find much favor in the eyes of the buyers, and I would have no trouble in disposing of many times the number of bushels of Gibraltar onions than I had this year at seventy-five cents a bushel. For these reasons I consider the Gibraltar now "the best onion" for my purposes, but I don't advise my friends to grow it by the acre or acres. First be sure of your market.

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**AN ODORLESS ONION.**—I admire a mild onion, but I don't want one without flavor or odor of any kind. If such an onion has been developed "by scientific breeding" I have no use for it. The "Milwaukee Journal" says on this subject, jokingly:

"An onion deprived of that delicious tang and the penetrating scent which goes with it can hardly be an onion. The palate which loves onions will not recognize it; calling a whitened, innocuous, insipid bulb an onion will not make it one. No true lover of onions will hail this new invasion of science. He eats his onion at dead of night, in silence and solitude. He rejoices in it and sleeps upon it. The incense of his praise fills the room and soothes him to delicious sleep. He rises in the morning after his sacrifice to pass the day in purification, to see no one until the sun hath sunk. It is a luxury and a worship. Shall he yield all this delight for an odorless bulb? Let others do as they will, he will not. An onion without an odor would be ashamed of itself."

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**A NEW TYPE OF TOMATOES.**—The Livingstons of Ohio were the pioneers in the production of the really perfect tomatoes of the present day. They have given us the Acme, Perfection, Tomato Leaf, Beauty, Stone, and many others. The novelty

which they gave us last spring under the name "Honor Bright" seems to be a new type of this valuable fruit, and one of especial promise. It is a variety for main crop rather than for first early. The growth of plant is strong, but the foliage has a peculiar striking yellowish appearance, so that the plant is distinguished at the first glance from all other varieties. The fruit is large and sets freely in big clusters. I believe we have at this day no tomato that gives us as much good fruit to the vine as the Honor Bright. The fruit at first turns a yellowish color. I, having planted it for a red tomato, took it to be a yellow variety, and for a time felt much disappointed. I was so much deceived by this yellow color that I picked some specimens, thinking they were about ripe, and I found them as hard as a stone, and jokingly called them "The White Stone." Specimens picked and laid away at this stage of development kept sound for weeks and finally turned a brick-red, and then proved to be a good, solid tomato, and my people say it is the best among our many varieties for cooking and canning. This shows that we should not be too hasty in judging. I was almost offended by the "yellow" fruit, for which I had no particular use. Now I feel that it has come to stay with us as a friend and favorite. I believe that its greatest value will be found in its remarkable keeping qualities. It seems almost proof against disease and decay. At the approach of the first fall frost I shall carefully gather every specimen that is in or near the yellow stage, wrap them in tissue-paper, and put them away in crates in a cool room for use later on. Some of the plants will be pulled up entire and hung up safe from frost. I believe with this variety it will be an easy matter to have good, ripe tomatoes (from the outdoor crop) at Christmas.

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**HARVESTING APPLES.**—In early spring, when I expected to have to harvest an apple crop this fall of several thousand barrels, I had fully made up my mind to use a Cook's apple-harvester, one of those contrivances which have been on exhibition at the various horticultural shows and meetings for some years, and which consists of a canvass stretched over a frame into which the apples are to be shaken from the trees. The great apple crop, how-



ever, has not materialized. I have only a fair setting on part of the trees, and scattering specimens on the rest, so that it will hardly pay to pick the whole fruit with ladders. The situation calls for the shaking-off method of gathering the crop even more than if I had something like a crop. But I see no necessity of buying a regular apple-gatherer, and believe a home-made affair will answer my purpose very well for this season. I shall make a light frame tapering off at one side to within three feet, and cover the same with duck. The illustration shows my plan, and I am quite confident that it will work well. The device is to be set with its broad end against the body of the tree, right under the limb that is to be relieved of its fruit. The apples fall down upon the soft surface, and roll down into a basket set under the narrow end. A tree can be gone over pretty quickly in this manner. Of course, the lower limbs are relieved of their fruit first,

before the higher ones are manipulated, in order to prevent apples from the higher ones striking and bruising those on the lower limbs. Surely this will be better than to shake the apples off upon the ground, and I cannot afford the regular picking method this year.

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**CELERY-BLIGHT.**—For once, anyway, I had to neglect my homecelery-patch (about 4,000 plants). During the hot and dry weather of July I found so much other work that it was out of the question to get the time for irrigating the celery-patch and fixing it up the way I wanted to. Consequently the drought brought on an attack of blight, and even then I could not attend to this crop, so that the disease had full sway for some weeks. I did not particularly care, for I wanted to try once more my favorite blight-cure—spraying with a single solution of copper sulphate. The remedy came too late this time, and the whole patch seems almost a complete loss. Where the plants were shaded in time (by setting up hoards as for blanching) the disease got only little foothold, however, and I am quite sure that timely boarding up and spraying once or twice with the bluestone-water will keep the celery-plants reasonably free from blight, at least so long as there is a fair supply of moisture in the soil. The conditions most favorable for the growth of celery are a cool, rich, moist soil and a warm atmosphere.

T. GREINER.

### NOTES ON LEADING MARKET APPLES.

BALDWIN.

The Baldwin apple, which has been for more than half a century a leading market variety of the New England States, originated as a chance seedling in a lane on the farm of Mr. John Ball, in the town of Wilmington, near Lowell, Mass., and bore its first fruit about the middle of the eighteenth century. For many years after the original tree came into bearing the variety was confined to the immediate neighborhood of its origin. Having attracted the attention of Colonel Baldwin, of Woburn, Mass., it was propagated by him, and was rapidly disseminated throughout the adjoining towns. Before the middle of the present century it had become the leading variety in New England nurseries. At about the same time it became popular in New York, and soon after this in Michigan. It was at one time considerably planted further south, but has been generally discarded as a market variety south of latitude 40° north, where the fruit ripens prematurely and does not keep well. It has not proved successful between the Mississippi river and the Rocky mountains, but succeeds well in the cooler apple districts of Colorado, Nevada, Utah, Idaho, Washington, Oregon and California.

The tree is a vigorous grower, with a roundish, upright, rather compact head. It is productive, but it is much inclined to overbear in alternate years, and to produce only a light crop in the succeeding years. In recent years it has been found quite susceptible to injury by apple-scab, which has materially reduced the yield and value of its fruit in the large commercial orchards of New York and Michigan, where it is now most largely planted.

The fruit is large, roundish conical, often oboate, and sometimes unequal in form. The cavity is of medium size and depth, and is usually wavy and russeted; the stem varies from medium to long, and is often clubbed at its attachment to the branch. The basin is of medium size, usually deep and ribbed; the eye variable, from small to large in size and from tightly closed to open, as grown in different climates. The surface is smooth, with a rich yellow ground color, which, on the exposed portions of the fruit, is covered at maturity with a deep rich red which is indistinctly striped with darker red. It is often slightly russeted, especially toward the base of the fruit. The dots are small, yellow, often russeted, and they are frequently depressed toward the apex of the fruit. The skin is rather thick and tough; the flesh yellowish-white, rather coarse, breaking and juicy, with a sprightly, subacid flavor and a slight astringence, which is characteristic of the variety. The core is medium, round, closed, meeting or clasping the eye;

seed long, pointed. The quality varies considerably in the various apple sections, but in the northern states, where it is now chiefly planted, it is entitled to rank as "good" for dessert and "very good" for culinary use. Its season is from December to March in ordinary cellar storage in the North.

Its special merits as an export variety are its productiveness, bright color, tough skin (which prevents injury from bruising during packing and while in transit), and its excellent keeping quality when grown in the North.

Its most apparent defects are susceptibility to injury of both foliage and fruit by apple-scab, and injury of the fruit by "dry rot."

BEN DAVIS.

The origin of this apple, which is now more extensively planted in commercial orchards in the United States than any other variety, is in doubt. Several statements have been published concerning it from time to time, the more credible pointing toward Virginia or Tennessee as its original home. It was widely disseminated through Virginia, Tennessee, Kentucky, southern Ohio, Indiana and Illinois before 1850, and was brought to the attention of pomologists at about that time by Mr. J. S. Downer, of Todd county, Ky. Though not of high dessert quality, the variety possesses so many valuable characteristics that it has steadily grown in favor among commercial orchardists from Maryland, Virginia and North Carolina westward. Further north, in the apple-growing districts where Baldwin and Northern Spy are the leading varieties, Ben Davis is less highly esteemed, as the growing season there is too short to permit the proper maturing of its fruit.

The tree is an upright and vigorous, though somewhat straggling, grower, and is a prolific bearer from an early age.

The fruit is large, varying from roundish oboate to cylindrical truncate in form, and is usually regular. The cavity is deep, acute and russeted, the stem rather slender and varying from medium to long. The basin is usually wide and moderately deep, of a peculiar saucer form, which is a strongly marked characteristic of the variety; the eye medium, partially open.

The surface is smooth, often glossy, and is of a rich yellow color, mostly covered with stripes and splashes of light and dark red. The dots are usually small and scattered. The core is of medium size, conical, regular, clasping the eye. The flesh is whitish, breaking, rather tough until fully ripe. The flavor varies from a distinct acid to subacid. In quality the fruit is better adapted to culinary than dessert use. It is specially esteemed for pie-making, and yields a handsome product when evaporated.

The fruit is easily kept until March in ordinary storage wherever it goes into winter in sound condition, and it stands cold storage and long shipment better than most other varieties.

The toughness of skin and flesh renders the fruit of Ben Davis less liable to injury from bruises than other varieties, so that it rarely becomes "slack" in the barrels, unless very carelessly packed and handled.

Though sometimes injured by scab in the North, it is rarely injured by this or any other serious disease in the middle Atlantic and prairie states, where it is most largely planted. The low dessert quality of the fruit is the chief menace to its future popularity.—Yearbook of Department of Agriculture.

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Our Farm.

THE BLOSSOMING AND POLLINATION OF INDIAN CORN.

For some years the writer has been making observations upon the blossoming of corn, and the following notes present some of the results. Among the questions for which answers have been sought are the following:

First—How does the number of staminate flowers compare with the number of pistillate flowers, or what is the proportion of pollen to ovules?

Second—What is the length of the period of blossoming of the staminate and pistillate flowers, respectively?

Third—What is the average, or mean, difference between the maturity of the stamens in the tassel and the maturity of the stigmas of the silk on the same stalk?

Fourth—What proportion of the pistillate flowers are usually fecundated?

Fifth—Are imperfect ears due to lack of pollination, imperfect pollen or to imperfectly ovuled pistillate flowers?

Incidentally to above the rate of growth of different parts of the corn-plant, the time between planting and blooming and between planting and maturity were noted.

As might be supposed, the number of flowers upon a stalk of corn is quite variable in the same variety, and likewise shows a marked difference in different varieties. For example, several large-eared dent varieties, like Chester County Mammoth and Scott's Dent, each produced over 1,500 pistillate flowers on a single stalk containing one ear. Two embryo ears on one stalk of the variety called Leaming produced 1,875 flowers. Five embryo ears on a single stalk of Blount's Prolific averaged a little more than 500 flowers on each ear, making 2,500 pistillate flowers in all.

The above numbers were found by carefully removing the sheath from the undeveloped ear when in full bloom and counting the number of styles or threads of silk. When the varieties of corn in question ripened, a careful count of the number of kernels on ears of average size was made, and the figures were as follows:

	No. of Kernels on Ear of Average Size.
Chester County Mammoth .....	1,010
Scott's Dent.....	990
Leaming.....	850
Blount's Prolific.....	420

This indicates that there is considerable variation between the number of pistillate flowers and the number of kernels on ear.

It is not a difficult task to count the number of spikelets in a panicle, and thus compute the number of stamens in the same. Admitting that only one of the two florets in a spikelet has polliferous stamens, we have but to multiply the number of spikelets by three, and this gives us a fair approximation to the number of perfect anthers.

To correctly compute or estimate the number of grains or cells of pollen in an anther is much more difficult, and this task I did not attempt.

Harshberger places the number at 2,500, and estimates that a single stalk of corn produces 18,000,000 pollen-cells. A count of several average-sized panicles or tassels of dent corn gave a mean of 9,300 pollen-bearing flowers. A similar count of the panicles of several flint varieties gave an average of 6,500, while the same number of varieties of early sweet corn averaged only 1,560 flowers with perfect anthers. That is, the following ratios between the pollen-bearing staminate and the pistillate flowers of the same class of corn were observed:

	Pistillate flowers.	Pollen-bearing staminate flowers.	Ratio.
Dent corn .....	1,520	9,300	1 : 6
Flint corn.....	940	6,500	1 : 7
Sweet corn.....	445	1,560	1 : 3.5

Using Harshberger's estimate of 2,500 as the number of pollen-cells in an anther we have the following ratios between pollen and ovules for three different classes or races of corn:

	No. of ovules.	No. of pollen-cells.	Ratio, in round numbers.
Dent corn .....	1,520	69,750,000	1 : 45,000
Flint corn.....	940	48,750,000	1 : 52,000
Sweet corn.....	445	11,700,000	1 : 26,000

The above figures indicate that there is a great excess of pollen produced, yet the

fact remains that there are many imperfect ears of corn.

It is well known that among the various means by which cross-fertilization is insured and self-fertilization prevented the difference in time of maturity of the pollen and stigmas in the same flower, or in different flowers on the same plant, plays a very important part. The following are the results of numerous observations on this point—observations which have extended over several years, and which include fifteen or more distinct varieties of corn:

	Dent corn (6 varieties)	Flint corn (4 varieties)	Sweet corn (8 varieties)
Per cent of stalks where pollen began to shed before silk appeared ..	95	89	98
Per cent of stalks where one half of pollen was shed before silk appeared .....	76	60	82
Per cent of stalks where all pollen was shed before silk appeared.....	32	38	44

If the above observations had been confined to stalks with a single ear the results would have been somewhat different, for almost without exception the silk appears earlier in comparison with the maturity of the anthers when there are more than one ear on a stalk. It must also be borne in mind that the first appearance of the silk in every case was counted, though only a few threads appeared. By waiting until one half or more of the silk in each case was in a receptive condition would have materially changed the percentage figures. Again, it was not easy to always tell just when the pollen is all discharged from a given panicle.

In several cases fully developed pistillate flowers, instead of staminate, were found on the center spike of the panicle. In every case of this kind the pistillate flowers develop first. In fact, the ovules are all fecundated before any staminate flowers in the same panicle were in bloom.

From the results given above there seems to be no question that Indian corn is cross-fertilized with almost as much certainty as our dioecious plants, like the silver-maple, willow, etc.

Dichogamy is so general a feature throughout the numerous well-marked varieties of corn that it is scarcely possible to doubt that it has been inherited as an advantageous characteristic from the common ancestor of the different races of this plant.

As a rule the discharge of pollen begins from two to five days before the silk appears. The staminate flowers first to mature are those situated on the upper part of the axis, or center spike, of the tassel. The flowering continues for the most part from above downward, those on the lower spikes ripening last, although the terminal flowers of the separate spikes are often later in opening than those lower down.

The pistillate flowers in their order of development are much the same as the staminate flowers on the main or central spike of the panicle. The flowers on the lower portion of the upper half of the coming ear appear first; next, those of the lower half, and last, the flowers of the tip.

Depending upon the variety, temperature, sunshine and dryness of air the length of time of the discharge of pollen from a given panicle varies from five to ten days. As a rule it is discharged most abundantly during the forenoon, from nine o'clock until eleven. The pistillate flowers are receptive as soon as the silk appears, and continue in this condition for from four to six days, sometimes longer.

Coming ears that were covered were successfully pollinated by a single application of pollen the fifth day after the silk appeared. The varieties of corn that suffer the most from imperfect pollination in Central Ohio are the early sweets. These are frequently plauted in April, blossom early, and often seem to be nable to ear perfectly. Some horticulturists believe that a certain range of temperature, within variable limits, is necessary for the proper fecundation of each species of plant. The temperature at which corn will produce virile flowers has not been carefully studied. May it not be the fact that the failure to fecundate is the reason why corn cannot be more successfully grown in localities where the mean temperature of the summer months is lower than it is in the corn-producing sections of the United States?

A few years ago the writer saw some quite well-grown, vigorous-appearing corn in Yorkshire, England. The staminate flowers were fairly well developed, and a considerable percentage of the stalks showed silk. Yet I was informed that no ears would be produced on any of this corn. There seems to be no doubt that the warmest and sunniest weather is the best for the fecundation of corn.

Failure of ears of corn to fill out at the tip has often been referred to lack of pollination. An examination of numerous prospective ears in full bloom shows that it is more often due to imperfect ovules. Each individual stalk of corn seems to have the energy or power to produce so many fully developed pistillate flowers. Taking the different varieties, this number is much more variable than the number of staminate flowers in the same variety. It is safe to say that where the ear is perfect below a certain point from the tip that the defective end is due to the lack of perfectly formed ovules rather than lack of pollen, and no later plauting or crossing of varieties will cure this defect.

The growth of the corn-plant under favorable circumstances is extremely rapid. A plat of Livingston's Dent, comprising about one eighth of an acre, was planted the present season on June 11th. On August 9th, just sixty days from the date of planting, this corn was in full bloom, and the stalks averaged something over eight feet in height. This was an average of something over one and one half inches a day from the date of planting. Embryo ears on this corn grew at the rate of four inches in length a day, and several times a growth of six inches in length of silk during twenty-four hours was recorded. Some of the silks attained a total length of over eighteen inches.

Some Early Cleveland sweet corn planted June 8th was ready for market in fifty-five days from the date of planting, and not infrequently in our gardens sweet corn that is not planted earlier than June 1st is ready for use within two months from the time of planting.

GENERAL CONCLUSIONS.—(1) Many, if not most, of the varieties of Indian corn require cross-pollination, being partially or wholly incapable of producing a fruitful ear when limited to pollen of the same stalk. The principal reason for this being that the pollen matures before the stigmas are receptive.

(2) Under favorable circumstances there is a great excess of pollen, and in plantations of any considerable size corn is usually well pollinated, owing to the duration of the period of flowering.

To secure perfect pollination of small areas seed should be planted at different times, or varieties that bloom in close succession should be selected.

(3) Imperfect ears of corn are due not alone to imperfect pollination, but to imperfect ovules as well. An ear that is not filled out at the tip is usually so because the pistillate flowers at this point were poorly developed. This may be corrected by a better selection of ears for seed or by better cultivation.

WILLIAM R. LAZENBY.

HANDLING AND MARKETING FRUITS.

The hot contest for existence now in any line of business calls for the best efforts of those who wish to excel or make a good living. The further a man is from market the greater the need of being an expert in picking and packing fruits for distant markets. The wants of the local markets are understood by all, and it is unnecessary to dwell here; but commercial fruit growing, as a rule, means shipping to distant markets, so their wants must be known and satisfied.

The model packers are the Californians. Necessity was the mother of invention in their case, and their methods in picking and packing and marketing are the best examples before us. Situated as they are, from two to three thousand miles from their principal markets, they are forced to study deeply every feature essential to success. As shippers they have to compete with every fruit-growing state in the Union, for they go into all the big markets and secure patronage on the merits of their products.

The producers of the East and of the Mississippi valley may claim they lack the climate of the Golden State which produces such handsome fruits. In the matter of freight charges, however, they are so favored that one advantage offsets the other.

The intelligent, progressive and enterprising fruit-grower who properly improves the opportunities existing can, in a dozen states that might be named, raise as handsome fruit as California producers. In looking over the situation the past ten years we can recall peaches offered here from Georgia, Texas and Missonri that were as handsome and attractive as the best that ever came here from California. These were, of course, exceptions, but they are in evidence as to what can be done in states so far apart.

Admitting that the trees or orchards have received that care they are entitled to and necessary to produce choice fruit, the picking of same calls for the exercise of the greatest care and precaution. The slightest bruise, which is hardly visible when leaving the shipper's hands, shows up at destination an ugly blotch, a discolored spot in which decay has sometimes set in. The sale of the package is already seriously damaged. If the packages are roughly or hurriedly handled, as is often the case, the situation becomes much worse. If a shipper had the time and means to spare to visit his market while his fruit was coming in he would realize the force of these remarks and often acquire some valuable pointers.

There is a needed tendency toward smaller and neater packages for fruits. In addition to getting nearer the wants of the consumer, the fruits are not subject to the injury they are exposed to in large packages, where the ripe are crushed by the greener ones. A light, attractive package helps to no small extent in the sale of the contents. The cost of the packages is no longer a big expense. The decline has kept pace with the decline in values of fruit, and new and improved machinery insures still lower prices for many of the packages necessary.

Conceding that the grower has done his duty so far in raising, picking and packing the fruit, the next step is the best market, and last, but not least, the firm selected to ship to. The alluring and neatly worded circulars have lead many shippers astray. Big figures, too, often prove a bait that many cannot resist. Every big market has plenty of firms who are entirely satisfied with their legitimate commissions, to whom the grower can ship without assuming any risk. Beware of the big, windy circulars that promise everything, and the firms that send them out.—P. M. Kiely, in Proceedings of American Pomological Society for 1897.

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## Our Farm.

## RURAL HOME NOTES.

A good deal of encouragement to honest agriculturists comes from the fact that efforts to secure special legislation have failed, while legislation of a general sort for the public welfare has succeeded. The good-roads law in New York state is a thoroughly agricultural measure. It carries the local-option idea, but gives to every locality an opportunity to improve roads at a minimum cost. We can speak quite as satisfactorily of the law granting to Cornell University a sum from the public funds to conduct experiments in forestry. A forestry school in America has long been desideratum. It is bound to be the rule with all the states. Preservation of timber and rational adjustment of forest to tilled land are necessary to successful agriculture. Cornell will do the work for New York state most admirably. We all have confidence in Professor Bailey's work. He will succeed in making the movement as popular as it is scientific. The right of every man to cut all the trees on his own property, even those in the adjacent highway, seems to most people a part of personal liberty. It is a privilege to be exercised only in its relation to general prosperity.

Is there a single industry that is not overdone? If there is, it is sure to be overdone soon enough. The dairy industry was exceedingly profitable up to about two years ago. But with milk at fifty cents a hundredweight it is worse than bankrupt. "What shall we do about it?" I asked a milkman, who answered, "We must go into something else." "Only," I replied, "to overdo that. Why not go back to old-fashioned farming, and instead of planning for market plan to raise what you will need to make your own family well fed, well clothed and otherwise well supplied. There will then be a surplus in all directions, which will find something of a market. In that case you will not be dependent upon money, but upon crops. And your crops will not be the worst thing you can boast of. That is, they cannot send you into the sheriff's hands." I have seen two strawberry bankrupts and no end of hop-growers under the sheriff's hammer. But, in looking back to old-fashioned days, I cannot remember a farmer who was not in at least comfortable circumstances. His aim was not to get money first of all, but, above all things, to have enough to eat, drink and wear. Beside that, he was always able to have a reasonable supply of books, and to educate his children, as well as make them comfortable.

The effort to make Europeans better acquainted with Indian corn has been a grand success. The exports of corn have recently exceeded everything ever known in the history of our country. Reports to the Bureau of Statistics show that the exportation of corn for the fiscal year ending with June 30th will exceed two hundred millions of bushels. In only three preceding years have the exports of corn reached one hundred millions of bushels. In 1890 the number of bushels exported was one hundred and three million, four hundred and eighteen thousand, seven hundred and nine. In 1897 this amount had crept up to over one hundred and seventy-eight millions. Our largest customer abroad is Germany. The Germans began with a bitter prejudice against corn, but last year they took from us over thirty millions of bushels, while all the other countries of Europe, Great Britain excepted, took less than sixty millions.

E. P. POWELL.

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## THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

## BONE-CUTTERS AND GREEN BONE.

If fowls are supplied with green bone the fowls will lay, and the bone will cost less than grain. It pays, because the farmer, by using green bone, will get two eggs from each hen instead of one. Green bone also contains a proportion of meat, and provides the mineral matter for eggs. By procuring a green-bone cutter the farmer or poultryman can pay for it in a short time from the saving of food and the increased number of eggs, and the one who has no bone-cutter is in the predicament of one who attempts to grow wheat without a harvester. Green bone is a complete food. It contains the nitrogen for the albumen, the phosphate of lime for the bones of the chicks, and carbonaceous matter for the yolks.

While a bone-cutter may cost a small cash sum as a start in procuring it, yet it forces the hens to bring back cash returns daily as a reimbursement for the outlay. It is a matter of eggs or no eggs. One may feed all the grain possible, but grain is not a complete egg-food. A pound of cut bone to sixteen hens once a day will cost about one cent, and will be worth ten pounds of grain, so far as egg-production is concerned. Grain exclusively is a detriment to laying, because it warms the body, providing only a portion of the essential elements necessary to egg-production, and is lacking in the substances that form the albumen, shell, etc. When the hen is deprived of a sufficiency of all the elements necessary to produce eggs she will lay only as many eggs as she can supply the albumen therefor. With plenty of corn she is provided with the elements for the yolk and to warm her body, such elements being known as carbonaceous. If the carbonaceous elements are proportionately balanced by the "nitrogenous" materials (cut bone, etc.) the hen will lay nearly every day, and will not become fat; but if she is fed liberally with corn, and is not given enough of the other foods, she will not lay so frequently; hence, the loss of carbon in the form of eggs will be reduced, and the excess of carbonaceous matter is then stored up within the body as fat. She may be apparently not too fat, and may lay fairly up to the average, but if the carbonaceous material is not balanced with the proper proportion of nitrogenous material she will soon become too fat; and this may happen gradually, as she may lay a sufficient number of eggs to prevent becoming very fat until she has done fairly well. But sooner or later she will cease to lay, succumbing to a natural law of supply and demand—not being able to produce something for nothing—the corn being useful in protecting her from cold, and serving as a valuable assistant in the production of eggs; but being deficient in lime and nitrogen, the farmer sustains a loss because he does not fortify his corn with nitrogenous foods.

## BROODERS AND HENS.

The winter raising of chicks must be done with brooders. It requires forty hens to care for four hundred chicks. They would take three times as much work as the brooders with that many chicks, and would also lose one half of them from cold, as the chicks would die if they did not stay under the hens all the time. Hens cannot compete with brooders in winter. The hardness of chicks depends on several matters, but much depends on the breed of the chicks. The chicks of non-sitting breeds begin to shoot out feathers from the wings before they are two days old, which is a drawback, as rapid feathering is weakening. Brahma and Cochin chicks feather very slowly, sometimes appearing very naked for weeks; but they are hardy, and stand it well, as they are not weakened by rapid feathering. When chickens feather slowly more of them can be raised, as they are not weakened by growing a large covering of feathers at an age when they cannot endure the process.

The main reason so many chicks that are well fed fail to grow when hatched in incubators and raised in brooders is that they are not warm enough. The hens that brood chicks usually have spring and summer weather; but when chicks are raised during cold weather the season for them is unnatural. Exposure to cold drafts of air, running on wet grass or keeping them where they cannot get under the brooder to warm whenever they desire will check

their growth, and when once checked in growth they seem to remain at a standstill. It is always best to destroy chicks that show symptoms of any disease that is liable to spread.

## USING INSECT-POWDER.

More chickens are killed through the ravages of vermin than from all the diseases put together. The birds are so weakened by these pests that they are very susceptible to many ailments, and where chickens have been practically killed by lice, in some cases the gall-duct of the liver was very full. When chickens have many vermin upon them their feathers usually look a little rough, eyes pale and sunken, and there is a line underneath the eye which gives the bird a peculiar appearance—as if the beak were too long for the head (crow-head) and the wings too long for the body. Even when the chicks appear strong and healthy it is well to catch one or two occasionally and examine them very closely, and if there are the least signs they should be well dusted with insect-powder. Those which have a large number of vermin upon them should be dusted with insect-powder twice, the second time from five to seven days after the first dressing, also at the same time applying a few drops of sweet-oil on the heads.

When dusting the chicken place a large sheet of paper on a table and lay the bird on its back; then part the feathers and shake the powder well in, so that the whole of the skin is covered with it. Turn the bird over and rub the preparation well into the ends of the flights among the quills. After they have been well dusted with the powder it should be knocked off the surface of the feathers with the hand, onto the paper, so that none is wasted.

## CHEAP FOODS AND VARIETY.

Clover hay is a cheap winter food for laying hens, and by its use the great difficulty of procuring green food is overcome. In fact, the essential want of the hens in winter is not so much that of green food as of bulky food of a nitrogenous character. For many years the writers and breeders have made a specialty of recommending all kinds of grain for poultry, the only variation being that at a certain time some of it was to be whole grains, and at other times soft food was to be given. It did not occur to them that the effect of a long-continued diet of grain was as injurious to fowls as to cattle, and that the concentrated grain food gave the best results when diluted (if we may use the expression) with some kind of bulky material, which not only promoted digestion, but also largely assisted in supplying the elements necessary for the albumen of the eggs, which was lacking in the carbonaceous food of the grains.

## INQUIRIES ANSWERED.

**Overfeeding.**—F. C., St. Louis, Mo., writes: "I and my neighbors are losing fowls from some unaccountable cause. They are fed wheat, corn and oats. I found the dead ones fat. The hens lay soft-shell eggs and eggs of abnormal size."

**REPLY:**—The cause is due to excessive feeding of grain in summer, making the fowls very fat.

**Turkeys Crop-bound.**—J. G., Cressing, Cal., writes: "My turkeys have drooping crop. When contents are removed the crops become full again."

**REPLY:**—It may be due to several causes, such as excessive feeding, the eating of some substance (such as dry grass) that packs in the crop, or to lack of grit or variety in the food. The mode of feeding and managing should have been stated.

**Worms.**—E. C. E., Glenco, Md., writes: "I have young chicks, six weeks old, troubled with worms in the intestines. The chicks become weak and die."

**REPLY:**—The cause is due to conditions (other than the food) existing in the ground or in filth. The remedy used is one teaspoonful of spirits of turpentine and one of sulphur in a pint of corn-meal, given once a day for a week to one hundred small chicks, or fifty of the age of three months.

**Lameness of Ducks.**—T. S. C., Cheboygan, Mich., writes: "I feed my ducks granulated oatmeal and middlings, wheat, clover and lettuce. They are inclosed in a yard. They have lost the use of their legs."

**REPLY:**—Several inquiries of a similar nature have been received. The ducks have been too highly fed, especially on grain. In summer they require only grass, and should not be fat. A mess of cooked turnips or potatoes twice a week may be given; but the weak legs can only be prevented by reducing the ducks in flesh.

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## Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

**Wanted—a Recipe for Mixed Pickles.**—Mrs. F. S. W. asks for a recipe for making mixed pickles by the barrel, such as are sold in the groceries and made of cucumbers, cauliflower, onions, peppers, etc. Let experienced readers give us a tried recipe.

**Feeding Pumpkins and Sweet-potato Vines to Cows.**—J. H. A., Broadhead, Ky. In feeding pumpkins to cows, remove the seeds and you will have no cause to complain of pumpkins not being excellent food for producing milk and butter. Sweet-potato vines can be cured into hay of some value, but we do not know that it has any injurious qualities.

**Tomatoes Failing to Set Fruit.**—G. W. H., Petaluma, Cal., writes: "My tomato-plants have made fine growth, bloomed well, but so far set no fruit. Planted in moist, sandy loam, fertilized with stable manure. What is the trouble?"

REPLY BY T. GREINER:—Soil probably too rich in nitrogen; possibly too moist. Use drier soil and chemical manures, especially potash and phosphates or ashes. Give the plants plenty of room.

**Protecting Hams From Flies.**—Mr. Reid Wallace writes: "In FARM AND FIRESIDE of September 1st J. F. A. asks if there is anything that can be put in meat pickle to keep the flies and maggots off the meat when hung. When you hang up hams dampen them with water and rub well with pulverized borax. I have hams hanging in my smoke-house at this present time. I put smoke to the meat just as soon as it is hung. Last year I kept a large ham until November, when it lacked only six weeks of being a year old."

**Ailing Egg-plants and Cucumber-vines.**—C. C., Dade county, Florida, writes: "What is the cause of egg-plants (about one third of the fruit) becoming yellow? What is the best fertilizer to use for this plant? Why do my cucumber-vines, which start bloom when two inches high, die when the vine is one foot long?"

REPLY BY T. GREINER:—Probably blight causes the egg-plants, as well as the cucumber vines, to turn yellow and die. I spray my egg-plants frequently and freely with the Bordeaux mixture, and this seems to save them, although I have more or less loss on that account. I often lose my cucumber-vines in spite of all spraying. Good old stable manure, applied in largest quantities, is the best thing for egg-plants, and applied perhaps less abundantly, best for cucumbers, under ordinary circumstances.

**Poor Pasture.**—H. A., Esperence, N. Y., writes: "I would like to know if a cow kept on pasture that has not been broken up in thirty years will do her best for milk and butter? Whatever of timothy or clover was in the field has all run out and left a coarse kind of grass, ragweed, horse-sorrel, penny-royal, etc. I have always used that field for summer pasture, and have made only one half pound of butter a day from a cow. I would like to make farming pay, and have the cow make a pound of butter a day, and I think she would if she had the right kind of feed. My cows have always done better in the fall when turned on other fields, which makes me think the fault is in the pasture. Is musty buckwheat fit food for a cow giving milk?"

REPLY:—There are fine pastures that have not been broken up in fifty years, but your field is not a pasture. By all means have it plowed and seeded down to a mixture of grasses and clover, and make a pasture out of it. There is no doubt that the yield of milk and butter can be doubled by renewing the pasture-field. Musty buckwheat is not fit food for a cow giving milk.

**Tomato Queries.**—J. B., Kent county, R. I., writes: "(1) Seedsmen claim everything for all their tomatoes. Please name a few varieties that come near their claims, such as good color, smoothness, etc. (2) Should tomatoes be allowed to become fully ripe before gathered to be put in boxes for market? (3) Are refuse tomatoes good for stock? (4) What kind of a trellis do you recommend?"

REPLY BY T. GREINER:—(1) There are now a large number of tomatoes which seem almost perfection itself, such as Perfection, Beauty, Stone, Imperial, Honor Bright, etc. See, also, notes on tomatoes in this issue or that will appear in later issues. (2) For immediate marketing tomatoes must be picked ripe. If to be shipped a long distance, especially to foreign countries, the fruit should be taken rather green. (3) I always feed all unmarketable tomatoes to my stock—hogs, cows, poultry and even horses. They are excellent food, and much liked by all farm animals. (4) No trellis can well be used where tomatoes are grown on a large scale. For the home garden any kind of support will do. A good way is a single stake, say six to eight feet high, to which the plant trimmed to single stalk is trained and tied. Or you may make a leaning trellis, consisting of stakes driven into the ground at proper distance, slantingly, and laths nailed on across.

## VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

**Drugs in Horse-taming.**—W. K., Wichita, Tex. As far as I know professional horse-tamers do not use any drugs; but I am not a horse-tamer.

**Difficulty in Making Water.**—H. K. L., Walton, N. Y. Have your mare examined by

a competent veterinarian, and the cause of the trouble undoubtedly will be found either in the bladder or in the rectum.

**Mustang, Bronco, Indian Pony.**—O. F., Little Valley, N. Y. There is no essential difference between a mustang and a bronco, for both terms are, in different localities, applied to the same animal. An Indian pony, if of sufficient size, probably makes the best saddle-horse.

**Unbilical Hernia.**—N. J. Y., North Hammond, N. Y. If the hernia of your young colt were a small one I would advise you to wait until next spring; but since it is of considerable size, the best you can do is to have the colt operated on as soon as convenient by a competent veterinarian.

**Swine-plague.**—H. D., Clinton, Ill., and E. F. G., Pownal Center, Vt. What you describe is swine-plague, or so-called hog-cholera. Prevention is possible, but where that is too late medication is of no use. A strict separation of those animals yet healthy from the diseased ones, if done in time, will save some.

**Probably a Tuberculous Abscess.**—A. M. P. What you describe is probably a tuberculous abscess that has opened somewhere into the respiratory passages. Do not use the milk until the cow has been examined by a competent veterinarian and been found not to be tuberculous, or until it has been shown by the tuberculin test that she is free from tuberculous.

**Aborted.**—C. E. K., Tryon, N. C. Your mare, probably much older than thirteen years—some horses, when for sale, never get older than ten years—lost her colt when she passed "the bladder of water." Probably her advanced age is, if not the only, at least one of the causes of her unthriftiness. At any rate your communication does not indicate any other.

**Callons Swelling on the Head.**—I. A. S., Mona, Pa. The callous swelling on the head of your cow, if irremovable, is very likely actinomycosis in the bone, and if of a year's standing, incurable. If it is movable it may be the same, with that difference that it has its seat in the subcutaneous connective tissue, and can be destroyed by means of caustics or be extirpated.

**Cowpox(?)**—V. W., Jamestown, Pa. It may be that your cow has genuine cowpox, and if so, she will be well before this; but your description rather indicates some other pustular eruption, sometimes called spurious cowpox. Have her milked with dry bands, and after each milking apply to the sores a mixture of equal parts of lime-water and olive-oil, or some boric acid.

**Bloody Milk.**—E. D. B., Kennedy, N. Y. Bloody milk, as has been often explained in these columns, may have various and different causes. If in your case the emaciation preceded the production of bloody milk, followed by a cessation of milk-production, the cause of the trouble very likely consists in the presence of a chronic morbid process, probably of a tuberculous nature.

**Barren Mares.**—W. W. B., Vesta, Texas. Mares, like other female animals, may be barren from several causes, and nothing can be done in any case until the cause has been ascertained. If this is done, and the cause can be removed, the mare may be made to breed, and vice versa. The bare statement that the mare is barren does not convey the least idea as to the probable cause.

**Probably Swine-plague.**—U. G. L., Lewistown, Ohio. The symptoms you give are observed in certain cases of swine-plague, or so-called hog-cholera, and as you say that your neighborhood is full of hog-cholera, it becomes highly probable that your sboat suffers from the same disease. If you have more hogs than the one sboat, you probably will have more cases of disease when this reaches you. Hogs yet healthy may escape infection if strictly separated and kept on non-infected premises.

**Somewhat Like Southern Cattle Fever.**—A. F. M., Otter Creek, N. C. The symptoms you describe are somewhat like those observed in southern (Texas) cattle fever, and if there was, in addition to those symptoms given, also bloody urine, I would not hesitate to pronounce it a case of southern cattle fever. If there was not, I cannot answer your questions, notwithstanding that the symptoms and the morbid changes you mention are rather characteristic, particularly the condition of the gall and the appearance of the spleen.

**Convex Soles.**—J. E. P., Franklin, N. Y. Have your mare, with her flat feet and convex soles, shod with bar-shoes which have a broad web, are very concave on the upper surface inside of the nail-holes, and perfectly flat or level outside of the same, where the shoe comes in contact with the lower border of the wall or shell of the hoof. By doing this the tender sole will be protected and a part of the weight will be removed from the wall or shell and be thrown upon the frog, usually strong and well developed in such hoofs. Your mare probably has been foundered, and has so-called pumiced hoofs.

**Period of Incubation in Rabies.**—M. L. McC., Mt. Vernon, Mich. Although the disease rabies, erroneously called hydrophobia, has itself a very typical course, the period of incubation—that is, the time between an infection and a plain outbreak of the disease—is of very irregular and uncertain duration, and may vary from a few days to many months. Therefore a dog or cat bitten by a rabid animal can never be trusted, and should under all circumstances be killed as soon as possible, before any damage is done. According to latest researches such an animal can communicate the terrible and absolutely fatal disease two or three days before it shows any plain symptoms of rabies.

**Capped Knees.**—W. C., Struthers, Ohio. Capped knees of long standing, especially if the causes continue to act, very seldom yield to any treatment. They are caused by bruising, and if of long standing, the bruised tissues have become degenerated and cannot be restored to a normal condition. If the causes cease to act, the degenerated tissues will gradually shrink, and thus the enlargement will become smaller and less conspicuous. It is different with a fresh case, or after the bruising causing the enlargement has just taken place, for then the exudates are yet fluid and can be absorbed. In such a case persistent and continuous applications of ice-water are indicated.

**Strained Flexor Tendons.**—G. S., Mass. The diagnosis—straining of the flexor tendons and suspensory ligament—is probably correct. Your horse needs the most perfect rest until fully recovered, and if the lameness is severe, a few applications, about five days apart, of oil of cantharides, prepared by heating one part of cantharides and four parts of olive-oil in a water-bath, and then separating the oil by straining (any drugist will prepare it for you), if thoroughly rubbed in along the course of the tendons between knee and pastern-joint, will essentially promote the recovery. Care, however, must be taken not to apply the oil too high to the bend of the knee-joint, nor to allow it to run down on the

pastern. After your horse has fully recovered, more or less tendency to become affected in the same way will remain for some time. Therefore the same remarks made in answer to M. M. in regard to shoeing—that is, not to permit the horseshoe to throw too much weight upon the quarters and the tendons by letting the toes grow too long, nor by paring away the quarters—also apply to your horse.

**Worms.**—E. T. A., Vanesburg, Ky. If the worms of your horse are large ones, Ascaridae, a good remedy is to give to the horse early in the morning, after the same has fasted since noon the day before, a pill composed of tartar emetic, three drams to half an ounce (according to the size of the horse), powdered licorice-root and powdered marshmallow-root, each three drams to half an ounce, and water just enough to make a stiff dough to be formed into a pill. If, however, the worms are small and pointed, not more than a few inches in length, a few injections once a day of a pint of raw linseed-oil into the rectum, best to be made just after the horse has passed dung, will dislodge them. It should, however, not be forgotten that all parasites are the more thrifty the poorer their host, and vice versa; also that worm remedies are of very little use unless new invasions of the worm-brood are prevented. Therefore, such a horse should be fed with sufficient quantities of wholesome and nutritious food (good oats in particular), and should not get any water for drinking from stagnant pools and ditches, or from any place likely to contain worm-brood, but, if possible, be exclusively watered from a good deep well or a good spring.

**May Be Corns.**—M. M., Mass. Taking into consideration the facts that your mare has been standing all winter idle in the stable, probably with her shoes on all the time, that the lameness, first insignificant, gradually increased, also that her legs are free from any blemishes, and further, that the blacksmith deemed it necessary to raise the heels to prevent (?) the frog from coming in contact with the ground, which, if anything, shows that the toes of the hoofs must have grown inordinately long and that the heels at each shoeing have been pared away, it becomes very probable that corns have developed, gradually, to such an extent as to make the animal seriously lame. Your description of the lameness might also apply to navicular disease, but you say that the "frog is very prominent," which, to say the least, makes the presence of navicular disease highly improbable. I advise you to leave quacks alone and have your mare examined by a competent veterinarian. If, contrary to my expectations, no corns should be found, the quickest way to ascertain whether there is navicular disease or not is to put a bar-shoe pressing upon the frog for a day or two on the lame foot. If this is done, and navicular disease is present, the lameness immediately will be much worse, while otherwise the bar-shoe will have no influence upon the same. The bar-shoe, after it has served its diagnostic purpose, of course must be removed. If corns are found, have them cut out, if possible, without drawing blood, have the hole filled with absorbent cotton saturated with tincture of aloes (in the ratio of one to four), and then put on a shoe that has no bearing upon the median quarter where the corn is situated. A bar-shoe with that part covering the median quarter cut out will answer best. Have the shoes of your mare reset once a month and have the shoeing performed by a horseshoer familiar with the mechanism of the horse's foot, one who does not cut down the quarters and lets the toe of the hoof grow long, so as to throw nearly all the weight of the animal upon the quarters and the flexor tendons.



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## Our Fireside.

## OLD LOVERS.

Heart of my heart, when the day was young,  
Hope sang to life with a silver tongue;  
Hope beckoned love down a flowery way,  
Where 'twas always morning and always May,  
And two true lovers need never part—  
Do you remember, heart of my heart?

Heart of my heart, when the noon was high,  
Work showed the way we must travel by:  
Duty spoke cold and stern in our ears,  
Bidding us bear all the toil and tears,  
Parting and losses, sorrow and smart—  
Have you forgotten, heart of my heart?

Heart of my heart, in the setting sun  
We sit at peace, with our day's work done:  
In the cool of the evening we two look back  
On the winding pathway, the noon's rough track,  
And the morn's green pleasure, where roses twine,  
Heart of my heart—with your hand in mine.

Heart of my heart, when the night is here  
Love will sing songs of life in our ear;  
We shall sleep awhile 'neath the daisied grass,  
Till we put on the glory and rise and pass  
To walk where eternal splendors shine,  
Heart of my heart—with your hand in mine.  
—E. Nesbit, in the Argosy.

## THE LOST WILL

BY WILL ALLEN DROMGOOLE.

## CHAPTER I.

## GETTING A NEIGHOR IN.

MRS. Nora O'Bryan always said, "There are stepmothers and stepmothers." And there were those who said Mrs. Nora ought to be authority on the subject, seeing she was second wife to Michael O'Bryan and stepmother to Timothy, as promising a young Irishman as ever boasted a brogue. And speaking of stepmothers, Mrs. O'Bryan used to wonder "what ever possessed Jonathan Womack to invite that ould cat, Malviny Womack,

to sit behind his coffee-pot and to mother the young b'y of him. For all the country around," she would declare, "knows that Malviny Womack has got a tongue and a temper to her. And the b'y's own mother that gentle and kind and deserving of better fate to fill the shoes of her, sure, now."

So said pretty little Mrs. O'Bryan from the next farm. And, truly, she might have considered her criticism a just one could she have peeped into the Womack farm-house one morning in January just at the moment when she was swinging her own kettle over the cozy fire Mike had kindled in the kitchen stove.

In the O'Bryan house all was hustle and life and health and happiness. Even while she adjusted the kettle little Mrs. Nora was wondering "how long it would take Michael O'Bryan to raise the roof off the barn with the howlings of him that he was mistaking entirely for singing."

Things were very different at the farm over the hill, where Mrs. Womack fussed and fumed and scolded; and Wesley, the boy, was like a timid rabbit, afraid to speak, almost, and poor Jonathan Womack lay flat of his back, half dead with consumption.

Snow lay on the ground that morning in January—hard, crusty snow that had fallen and frozen, an unusual fall, they said, for that section at that season. At sunrise there was a crunching sound in the snow, and the hard crust cracked and broke and crumbled like glass under the step of the sturdy young boy trudging to the wood-pile. For the supply of wood laid by for the winter had been exhausted before the unusual severity of the southern winter, and the man of the house was, according to his sharp-voiced young wife, "flat o' his back with consumption and not able to turn in and do a blessed thing about the place."

So, in the absence of an older head, hand and shoulders, the masculine work of the place had fallen upon the son, Wesley; a heavy burden enough, but borne as only a young, ignorant and good-natured boy can bear such burdens—without complaint, without thought, indeed, that it was hard, since the hearing of it afforded relief to the sick man unable to attend to his share of the plantation matters.

It was the stepmother who made the work seem drudgery—Mrs. Malviny Womack, familiarly known to the O'Bryan household as "the ould cat." It was just at sunrise that she called to the boy asleep up-stairs that "he'd better get up and be getting the wood to cook breakfast, if he expected any."

True, the wood-box should have been replenished the night before; and true, this was a part of the boy's work. But the stepmother had found other things, and enough of them, to occupy his time, and the empty wood-box was forgotten.

She stood watching him from the kitchen-door as he broke a path through the snow. He was well and strong and willing; she knew this well enough. But deep down in the lonely heart of the lad there was a craving for sympathy and affection that might have been turned to good account had the step-

mother thought it worth while, or had she even thought it worth while to study the boy's character and disposition enough to make out what manner of lad it was with whom her life had come in such close contact.

But the stepmother did not consider; she would have control of him many years yet, and of his labors; after that—well, there was time enough to think of that. The stepmother was young and not bad-looking, and the sick man in the house could not live long, and there was a will in his desk that left her the farm—the farm that was by right the boy's, since it had been his own mother's. The sick man was not free from blame in the matter of the will, yet there were, as the law sometimes expresses it, "extenuating circumstances." He had made the will the second week after he had brought Malviny Odom to live at the plantation as Malviny Womack; that is, when the honeymoon was in full and he deeply in love.

That Mrs. Malviny had prompted, planned and perfected the arrangement not a soul doubted, for the reason that all the country-side knew Madam Malviny. There were those who declared that while she had always had her temper she had not been without attractions as a girl. It was the taste of prosperity that had made a virago of her. For Malviny Odom had been a poor girl—one who had worked for her daily bread. The round, fat, ill-tempered woman on the kitchen door-step, scowling at the overburdened boy trudging away in the early sunrise to the wood-pile, bore but little resemblance to the young girl who told him her needle and thread, with a smile and a good word for her customers, before Jonathan

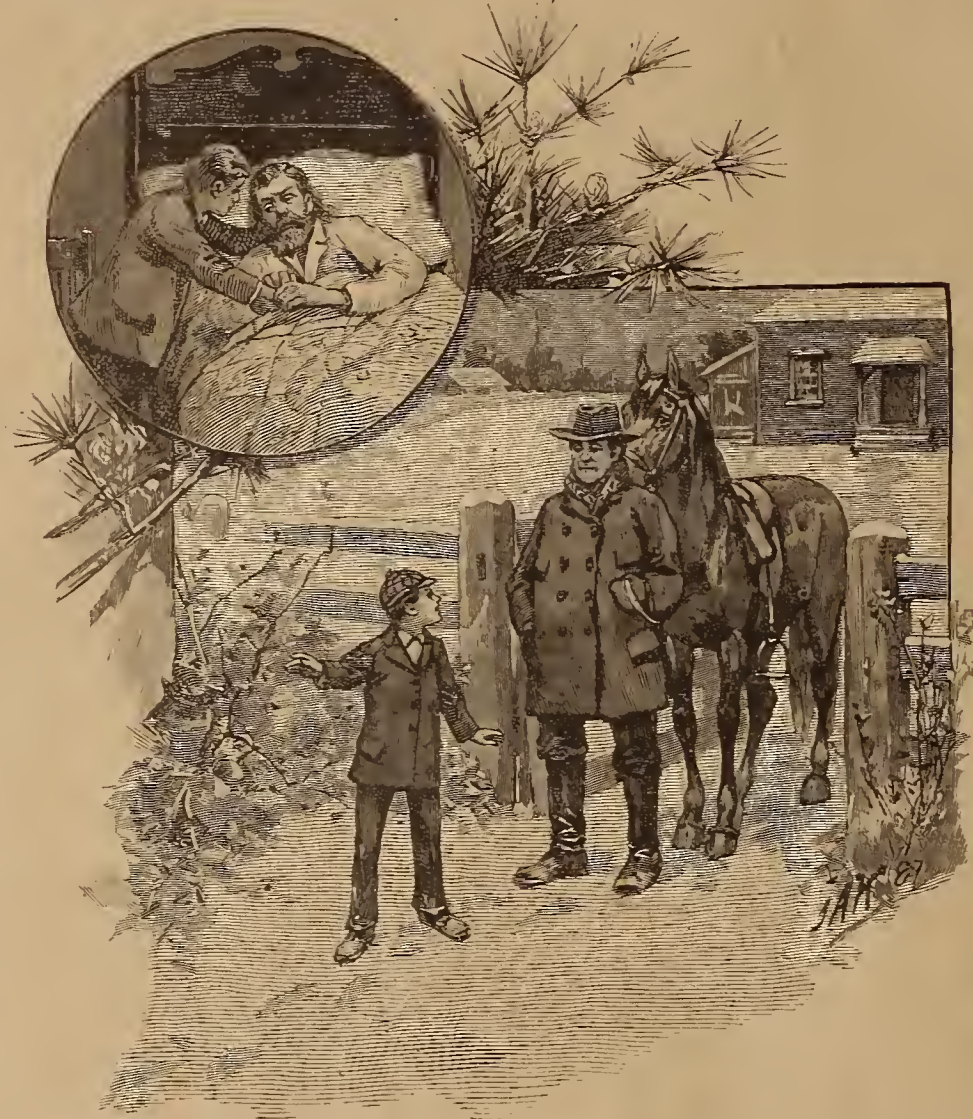
declared, had "idled themselves and had made an idler of Wesley as well." She wanted no more companions in laziness.

The sick man sighed as he thought of the boy he was leaving. "She'll make a drudge of him," was his thought, "till he's a mau grown. And what a man he'll be, with never a tender word to keep the heart of him gentle and the soul of him strong! Poor boy! Poor Wes! It would break his mother's heart!"

He turned upon his pillow to listen. There was the sharp crackling of the cedar faggots and the rattling bang of tin pans that told his wife was setting about getting the breakfast; then again the crunching of snow as Wesley started to the milking-pen.

"He does more'n his share," mused the sick man. "He does more'n a man's share. He's doing mine and his, and half the time her work, too. O Lord! O Lord!"

He groaned, drew the sheet up over his sunken, sorrow face, and silently began to pray—not for himself and his soul about to start out upon that long, unknown journey, but for the boy he was leaving; that was the burden of his prayer. And as he prayed he thought of the wrong that had been done him—robbing him of his right to his mother's property. The boy would grow up to be a man some day, and would understand, and would hate him in his grave; not for the property, but for the injustice. But that wasn't the worst of it. It was that which injustice and the feeling of bitterness would do for the boy himself. As he prayed he put his fears into words, and talked with his God as to a friend, telling him all things, and asking for light out of the darkness.



"FOR YOUR LIFE DON'T TELL HER."

"HE WANTS YOU QUICK, IF YOU PLEASE, SIR!"

Womack married her and settled his son's plantation on her. The face turned to Wesley was sour and cross and marked by ill-temper. "He's the torment of my life!" she declared. "The very torment! Not a dozen sticks of wood in the box, and him sound asleep! The trifligest, laziest boy!"

As she went back to finish her toilet, while Wesley cut the wood and kindled the kitchen fire, the sick man turned restlessly in his bed. He had heard the complaint. He remembered, also, to have heard the clock strike ten the night before, when Wesley came in from feeding the stock. He did not get back from town, where she had sent him on some business of her own, until seven, and then she had ordered him to clean out the stove-pipe, and after that to wash up the supper things. In the forenoon he had helped to wring and hang out the clothes that she had washed. In the afternoon he had churued before starting to town. He had counted upon getting off early and coming home before dark, in time to cut the wood and do the other chores, or else getting up very early in the morning to fill the wood-box. But tired nature had rebelled, and Mrs. Womack, who retired early, had awakened first. Her sharp voice was the first sound that had broken in upon his slumbers.

They were not always so pushed for help at the Womack plantation. There had been a cropper ever since Jonathan Womack got down with consumption, but the last man had died only three months before, of fever, and the new croppers would not move in until February. They were negroes; Mrs. Womack had preferred them, owing to the fact that the last man had a family of children who, she

"It's not the work I'm afraid of," said he. "Work ain't going to hurt my boy. It's the injustice that will breed rebellion and hate in his heart that is now all good and warm and true; the missing opportunity that he will some day understand and learn to hate his father for; the kind word lacking, the oppression! O Lord, O Lord, O Lord, help!"

With the prayer came a kind of peace, in which he began to plan, almost without knowing it, for his boy's future. And in planning his mind traveled backward to the first cause of the present state of affairs.

"She used to be right good to Wes," he mused, "and tolerable fair to him. I allowed she had set out to make him love her, as a woman taking another woman's place and child ought to do. But I knew she always kept her grip on him; made him feel he had to work for her. Then all at once she began to change—changed in a day, almost. And now I want to know what made that change? When she first come here she thought this farm and everything was mine during my lifetime; after that she allowed it belonged to Wes; thought his mammy made a will that way, as she ought to have done, and would have done but for her trust in me. For everybody knew Wes' ma come to me rich; that I was nobody but the son of her pa's old overseer. And Malviny must 'a' got it into her head, like the balance of folks, that the property was Wesley's. And she set out to keep mighty soft and strong on Wesley, meaning to saddle herself onto him the balance of her days. But one day she got a hint; one of the neighbors told her, without thinking what he was doing, that my wife left no will;

said she wanted to show the world she could trust her money and five hundred acres of land where she could trust herself. And her last words to me were, 'I know you'll be good and fair to little Wesley, whatever else may happen.' And I meant to; O Lord, I meant to. And when I found out Malviny didn't know anything about the will, I made up my mind to just keep still and make one myself by and by."

"But she got wind of it—found out from one o' the neighbors. We hadn't been married two weeks, and I reckon I was a sort of fool about her, for no sooner had she found out that the boy had nothing, and unless I made a will this farm would be as much hers as his, than she set to work at me. A new will. She wanted the farm put in her name. She just wanted to triumph a bit over the fine ladies she had sewed for in her days of dependence. Of course, I ought to know she would always take care of little Wesley. Then, too, she said I could put it back in his name or destroy the will any time I felt like it. But it would be such revenge, such fun, just to feel like a land-owner for a little while. And fool that I was, I done it. Then come the fight for Wesley. She has druv him like a slave ever since. And what's the reason? The boy is poor, and the world will treat him the same way unless he can possess enough to help him hold up his head among men. Riches, I admit, are dangerous, but a manly independence is most desirable."

There was another clatter of pans, a slamming of doors, and the stepmother entered, a plate in one hand, a cup and saucer in the other.

"Here's your breakfast, pap," she began, then suddenly stopped. "Sakes above! What's the man kivered over with bedclothes for? Sheet pulled over his head like a corpse. To give folks a start, I reckon. Here, Wesley, come in 'ere and set a chair for this plate before I drop it. I'm that tired of slaving for lazybones that I can scarcely stand on my feet."

Wesley obediently left his own untasted breakfast to arrange the chair at his father's bedside.

"Wet the towel for me, son, and wipe off my face," said the invalid. "Pa's mighty poorly this morning; mighty poorly."

While the boy obeyed, Mrs. Womack, not suspecting there was a scheme on foot, went back to the kitchen to eat her cakes while they were hot. This was the opportunity for which the sick man had been anxiously waiting for more than three days. He placed his long, thin yellow fingers on the boy's wrist in a clutch at once so strong and so full of meaning Wesley instantly understood that it meant silence and attention. When sure of his earnest attention the invalid motioned the boy to bend his ear down to a level with his lips.

"When you've finished your breakfast," he whispered, "slip over to Mike O'Bryan and tell him I want him here, quick. She (nodding toward the kitchen) must not know you went. Just tell Mike that much, and he'll know what to do. He always knows what to do; so does his wife. When you get back—"

He tried to lift himself in bed, but only to fall back, dragging the boy with him, but still clinging to him and whispering:

"She'll ask you where you've been; for your life don't tell her. But don't you tell her—a lie. Don't ever lie to her. Don't ever let her skeer you into one—never; if you do you are gone. If it comes to a lie or a beatin'—don't—lie—"

A red head appeared in the doorway; the "ould cat" was forever and ever on the watch. She had guarded thus his opportunity of making a new will since the second week of her marriage. Fortunately the invalid saw the red hair coiled up on top of the big head of her like a copper-snake.

"If you'd lift me a little mite, son," she heard him saying, "I believe I could make out to sit up some and eat a mouthful."

He had one arm around the boy's neck, and was making a mighty effort to lift himself in bed. The attitude was too suggestive of affection to be altogether agreeable to the money-loving schemer in the doorway. She stepped forward, and pushing Wesley aside, said:

"Well, s'pose you try holdin' to me awhile; I'm about as strong as Wes, I reckon."

But that sensation of fear that had attacked her on seeing the father and son seemingly locked in a close embrace did not leave her at once. And as she attempted to lift her husband in bed Mrs. Womack registered with herself a resolve that she would in the future run no more risks. Henceforth she would attend upon the invalid herself. The time was too short to lose all after her years of scheming.

"Go eat your breakfast, Wes," she commanded; "and when you're done you can wash up the things while I make up your pap's bed. Earn your salt, boy; earn your salt."

Wesley stopped in the kitchen only long enough to snatch a piece of bread from the table, swallow a cup of hot coffee and lift his cap from the peg behind the door. He recognized this as his opportunity for doing his father's bidding. And without a thought as to the consequences that would surely follow disobedience to his stepmother, he softly left the kitchen by way of the back door.

As he ran across the yard the thought occurred to him that his mother might step to the door and see him crossing the big hill to farmer O'Bryan's. So on the impulse he

skirted the yard and dodged behind the old spring-house that is to play a prominent part in this story. The house, a large old rattle-trap, a barn-like building, would effectually screen him from observation if he kept to the meadow until he should have climbed the hill; then he could, with all safety, strike across to the "big road."

As he passed the spring-house Wesley looked up at the great, spreading old black roof, the eaves touching the ground on one side, making it look like some monster hen that had been toppled over on its side, and because of its great weight had been unable to get itself straight again.

This great spring-house, that had stood for generation after generation, had lately suffered a sort of cave-in; not entirely, to be sure, but quite enough to warn the owners of danger. Underneath was the spring, full forty feet down, with a little winding stone stairway cut in the solid rock after the first ten feet were passed. This first part of the descent was made by means of wooden steps, ending on a little platform, upon which rested a longer, narrower and exceedingly dilapidated stairway that had once led to the loft in the roof. The floor at the bottom was of solid rock, and around the wall were shelves, uneven and jagged in places, but a resting-place provided by nature for the piggins of milk and jars of butter that had been accustomed to adorn them before the "cave-in" a few years back. Since the old roof had dropped, and there had seemingly been an end to the danger, the owner gave no more attention to it; but the place had been abandoned as a spring-house. The spring itself, a little, round, blackish-looking pool deep down in the rocks, gleamed like a sullen black eye in the darkness of the cavern. There was always a desperate dash of water sounding through the gloom, a roar and tumble, and a half grumble, and the pent-up current made its way through its underground outlet. It was said to be bottomless, and once, long before it passed into the possession of its present owners, a child had fallen into it—tumbled from the narrow stairway into the water and been dragged down by the underground current out of sight in an instant. Three days later the bruised and broken little body had been picked up on the low, green bank of Stoue river, five miles distant.

After that another horror was added to the old spring's list of troubles. Superstition wrapped itself about the old gray ruin until scarcely a hand on the place could be prevailed upon to go near the "haunted spring," after dark. The croppers' children avoided it even in the broad light of the day, and the croppers themselves "allowed they hadn't no call to meddle with the onlucky consarn." The step-mother was not without her dread of it, and to Wesley it was simply a place where ghosts walked about at their leisure for the destruction of those who ventured within their territory. The little children on the plantation had been warned from time to time by their mothers to "keep 'way fum dat ha'uted spring-house ef dey didn't want dey fron' teef all pulled out some day, or de ha'r ter fall out'n dey haids, or else de water ter suck 'em under an' git 'em drowned daid."

Only Jonathan Womack, the man lying dying on his bed by slow degrees, had laughed at their superstitions. He had trudged up and down the rickety old stairs since he was a boy, carrying butter and milk down to keep cool in the deep old spring cave. He had climbed the wooden ladder to the loft long after the loft had been given over to the possession of the bats and owls and gophers, who had taken up their abode there. He had hunted for blue-birds' nests in the hollows of the old cedar timbers, and watched the young birds hatch and feather and try their wings about the roof of the old, old spring-house when he was a boy, the son of a rich man's overseer. He remembered there was one hollow in a cedar log that projected from the roof, larger and deeper and more roomy than the rest, that he had called "the bluebirds' cradle," and in which he had hidden his marbles and other childish treasures away from his brothers and playmates. He had felt no fear of haunts and hobgoblins; he had regarded them rather as friends who frightened the little ragged, half-naked pickaninnies away from his hidden possessions.

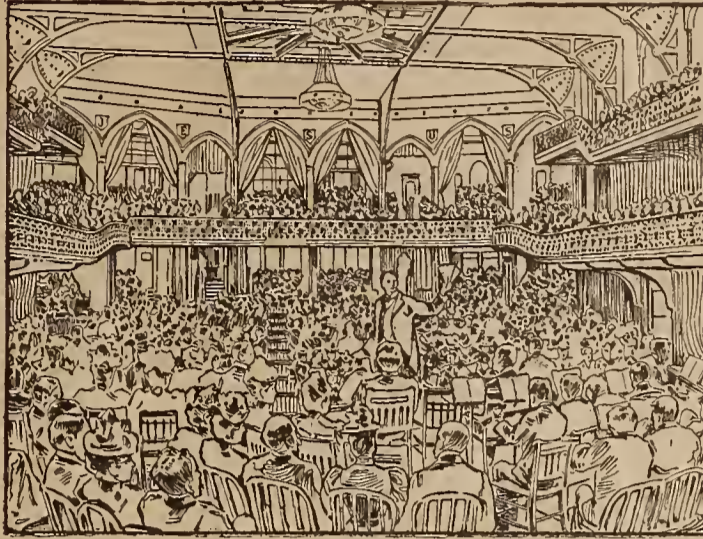
Not so with his wife, as Wesley knew. Like Wesley, she had a feeling for the old ruin that was part fear, part fascination; but it kept her safely beyond reach of the haunted spring.

As Wesley skipped around to the rear of the big, slanting roof he chuckled:

"She won't look for me here, I reckon," said he, and the next moment he was skipping away over the snow, bound for the O'Bryan plantation just one mile distant. He liked the O'Bryans, especially the nimble-tongued, silver-voiced wife that Mike called "Nory," and whose advice he never failed to ask even upon the most trivial matters. Mike himself was shrewd, clear-headed, honest as the day and sincere to a fault. All the neighborhood knew there wasn't a lawyer at the county-seat with a cleverer brain than he, or a keener wit or a closer insight into human nature.

It was not quite seven o'clock when Wesley stopped at the farm gate. A roan mare, saddled and ready for mount, stood at the hitching-post, and down the walk to the gate, saddle-bags over his arm, muffled in his great coat, came Mr. O'Bryan. Wesley breathed a sigh of thankfulness that he had come in

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time to catch him before he started upon his journey.

The farmer saw the shivering boy with his hand hesitatingly fingering the gate-latch, and hastened his steps, the Irish heart of him keenly alive to what might be the meaning of this early morning call.

"Good-morning, Wesley," he called; "and now I'm hoping your pappy's no worse this morning, son."

"No, sir," said Wes; "no, Mr. O'Bryan, I don't know as he's any worse, but he wants you, and he wants you quick, if you please, sir."

"Sure, now," said the farmer, in a half-musing way, "I was just the moment going to town—"

"You must go to father," said Wesley. "I don't know what he wants, but he said you were to come right on, quick. And you're not to tell that I've been here, if you please, Mr. O'Bryan."

The Irishman whistled softly.

"Sure, now, and has the stepmother been—" Wesley lifted his hand. He would not wilfully injure even his stepmother, though he knew he had small cause to love her.

"I wasn't to tell you anything but just to come on," said he, "and to ask you not to let on I'd been here. I think it's just a business matter, but I don't know for sure. Father said to tell you that much and you would know just what to do."

The farmer smiled.

"You priss the hutton, Oi'll do the rest, Wesley," said he, giving the boy a friendly nudge through the gate-panels. "Do you skip back before the heddame misses you; Oi'll do the rest, Wes."

Wesley needed no second bidding. In an instant he had started back across the snow-covered meadow.

The farmer turned back to the farm-house, tossing his saddle-bags in a corner of the long gallery, and calling, as he went:

"Nory? Oh, Nory? Nory O'Bryan, I say, and have you gone deaf this cowl morning, Mrs. O'Bryan?"

The fat little round figure of Mrs. O'Bryan appeared in the kitchen doorway. The piquant, pretty face was dimpled with smiles that belied the sharp shrew's voice that called out, lustily:

"Faith, and can't you be off with you without raising the roof, Mike O'Bryan? I am not deaf, and I'm not dead; but faith, I can't say it long, with the racket you're after kaping up, Misther O'Bryan."

The farmer chuckled and pointed to the saddle-bags lying in the corner.

"Oi've no need for thim this day, Misthress O'Bryan. But do you get into your best things; you're going to town in the stead of me."

"Sure, now, and who said it?" demanded pretty little Mrs. Nora.

"Oi have said it," said Mike. "And you're going to wait for Misthress Malviuy Womack's orders, and you're to be ready for any crazy thing that may happen, my Nory, sure, now."

Mrs. O'Bryan nodded and tapped her pretty temple with her finger.

"Sure," said she; "sure. But is it yourself or Misthress Womack has gone daft this day, Michael O'Bryan, Oi'd like to know."

The farmer dropped his banter and became serious.

"The little b'y o' Womack's been over this

day, Nory; skipped over like a hare dodging the dogs, for sure; said Oi was to come quick to his pappy, and that Oi was not to say Oi'd been sent for. Can you read between the lines, Nory O'Bryan, or can't you?"

"The ould cat's been clawing," said Nora; "and I mind he's remembered the poor b'y of him at last. At last—well, and why don't you he out and gone with you, Michael O'Bryan, before the good fit passes and the ould cat sharpens her claws? Why don't you go on, you baste of you?"

"Sure," said Mike, "Oi must tell you about the business to town first, Nory, else the ould cat will find out—"

"Out with you!" shouted Nora. "As though I couldn't take that trip to town—a scant five mile—and handle Mrs. Misthress Womack, and buy out half the stores and niver lave the farm a blessed minute! Out with you, Oi say, and help the little lad out of the ould cat's clutches. Remember your own b'y, born the same day of him, and the mother of him, dead the same day of the b'y's coming, and go to this b'y."

He turned and went without further words. He knew that Mrs. O'Bryan was as she said, thoroughly capable of handling the neighbor across the way, for he told himself, as he rode down the road in the crisp, clear air of the winter morning, "There niver was a scheme hatched nor an accident befell that was too deep or too dark for the brain of Nory O'Bryan—niver."

Then he sighed, thinking of his own boy, so safe and happy in the school at the county-seat, the boy whose mother had but received him into her arms before she left him forever. He was comparing that boy with this one, to

whose help he had been summoned, for he divined, as did his wife, the meaning of the secret summons. He was always comparing them—these two motherless boys, to whom had been given such very, very different step-mothers. And he ended his musings always with the reflection that "a man who brought a child into the world has no right to ask an ould eat to come over and mother it." Further, he closed his reflections by saying, "Well, sure, now, and they couldn't all find a Nory O'Bryan."

[To be continued.]

#### THE AMERICAN LOG CABIN.

Among the projected institutions of Washington is a series of national galleries of architectural design, to represent, by means of reproductions of typical examples, the characteristic architecture of Egypt, Greece, Rome and other, lauds and periods from remote antiquity down to the present day.

The National Museum has miniature reproductions of Zuni houses and other aboriginal types, and in the National Zoological Park is a full-size model of a Main Indian birch-bark lodge, constructed, we believe, under the supervision of Joe Francis, of Oldtown. This is suggestive of a wide field for such work, which might well grace the slopes of that beautiful park. A series of characteristic American Indian dwellings—lodges, tepees, wigwams; of earth, bark, skins and palmetto; representing eastern, western, northern and southern tribes—the people of the pine forests, the mountains, the plains and the everglades—these would add immensely to the picturesque quality of the park, would have a permanent interest and would popularize with the simple directness of object-lessons a knowledge of the people who occupied the land before us.

The one architectural object which most of all is deserving of commemoration, not only in some fitting site at the nation's capital, but in our large public parks everywhere, is the American log cabin. Poetry and romance invest the log cabin. It is the rude structure which has everywhere marked the advance of civilization. About it have been waged the wars of races. It has been the frontier fortress, the outpost planted in the enemy's country, and held against desperate odds by the high daring, the tenacity and the grit of the expanding nation's best manhood. The story, too, of woman's courage and faith and fortitude is a story inseparable from that of the American log cabin, and one worthy to be written in those characters of gold which the ancients reserved for their sacred writings. The log cabin has sheltered the sterling, homespun virtues of an honest, simple and unsophisticated people, those who in the days of the beginnings gave character and stamp to communities and states. It has cradled statesmen and poets and leaders of the people. It is the characteristic and historic dwellings of America, and as such it deserves to be perpetuated in popular memory and affection by typical forms set up in public places.—Forest and Stream.

#### HAWAII'S SINGING MOUNTAIN.

Mount Tantalus, just outside of Honolulu, can be made to sing any song or run any score in the whole musical repertoire. The natives attribute it all to the ghosts of departed warriors said to inhabit the fastnesses round about, but science has found the real explanation. The top of this mountain is voiced like a dreamland, and even the most staid nature will thrill and be mystified by its sweetness and melancholy. It is at night-time only when the plaintive and strange sounds are heard. At times they are loud and boisterous, like midnight revels, and again they soften into a complete wail. These voices, which moan and scream and sob about in the night, are believed by the superstitious natives to be the spirits of the warriors whose mangled bodies lay at the foot of Pali.

To destroy this pretty illusion is almost barbarous. Still, these sounds, so reverently listened to by the Oahu natives, can be caused by nothing more than the ocean-breakers beating on the windward shore, and the plaintive cadence of the calmer surf below, alternating with the angry and wilder scolding of the storm above, echoing among the dales and crags of the lofty mountain. The feeling as if the presence of human spirits about you cannot be shaken off, and the weird song of terror as of human voices, cannot be hushed nor translated into their sounds by even a strong mind. On a dark night a sensitive and superstitious mind could not endure with comfort the hideous forebodings of the scene. Now, if two persons whose voices chord should sing from one of the heights, it will be found that the mountain will catch up the song and take it from cliff to cliff, carrying it off into the distance in one direction and bringing it back in another, until a perfect round is obtained. Then if the two singers suddenly cease their song the mountain will go on singing it for quite a long time after they are silent.—Saturday Evening Post.

Julius Hines & Son, the well-known dealers in furniture, carpets, etc., Baltimore, Md., have issued a new art catalogue which is lithographed from hand-painted plates, thus enabling purchasers at a distance to see how the goods appear before purchasing. We would advise our readers to send for a copy at once.

#### POLISH AND RUSSIAN KITCHENS.

Poland has a haze of romance encircling it, due to its misfortunes, and its history has been read by many, but of the details of such a domestic region as the kitchen few have any knowledge. Both Poland and Russia are still very barbaric in their household arrangements, and quite as interesting as the kitchens are the dishes that emanate from them.

I am going, therefore, to take literary license and give an insight as much into the cooking and life as the kitchens. Town and country differ largely, the refinements of modern life have not penetrated to the country at large, and so we still find houses whose domestic regions leave a great deal to be desired.

Cooks sleep in the kitchen, and the other servants are accommodated in a similar casual manner. In large country houses the kitchen is a separate building, sometimes joined and sometimes entirely detached from the house. The system is followed in Russia, where, however, servants have a far worse time, it being no unusual thing, even at the present time, for servants to sleep in the passages with simply a cushion under their heads, and the women servants lay their weary bones to rest in the loft of the lodge or outhouses.

The great number of servants kept by even middle-class people accounts for the (to say the least of it) rough and ready method of housing them. Each servant in Russia has his or her vocation, and will undertake no duty not pertaining thereto.

In farm-houses and lower middle class the family accommodate themselves in a similar manner. Their windows are all double on account of the excessive changes of temperature, and the kitchen stoves are huge in size, some whitewashed, and with a very broad shelf running from them the length of the kitchen. This serves as the bed for the family.

In wealthier houses, where greater comfort prevails, the servants' apartments are detached from the house, sometimes adjoining the kitchen. This is necessary, for both in Poland and Russia the lower classes are excessively dirty. They never wash except when they pay their weekly visit to the baths, on which occasion they steam their clothes clean as well.

The hours of work are much the same as ours, and the cook is an important personage, who buys all the edibles for daily consumption, occasionally accompanied by her mistress. These same edibles, by the way, are to be had in Poland at ridiculous prices. . . . Poultry is also cheap, but fish is dear.

Both in Russia and Poland the cooking is highly flavored, and a liking for things acid is noticeable, particularly in the soups. Oseille soup, for instance, itself a sour thing, is further sharpened by the Poles by the addition of sour cream as a flavoring.

In Poland we do not find much furniture; a large bureau and a freezer strike one as the most prominent features. Next comes the abundance of wooden utensils. All pails, tubs, etc., are of wood, and, indeed, in the country the kitchens themselves are built throughout of timber. The stoves in the country are much like the French ones, and a further resemblance is occasioned by the number of copper pans which hang on the walls.

The icon, or religious picture, which is such a fetish of the Russian race, is not absent from the kitchen, and their superstitions are too numerous to instance, even though they influence domestic life to a great extent.

Dinner is the great event of the day, after which masters and servants alike take a siesta. Cabbage is even more beloved by Russians and Poles than by the Germans, and one of the principal dishes is a soup concocted from cabbage, sour apples, a bit of lard and some meat. Yet vegetables otherwise are not much eaten; meat and potatoes form the staple food.

The enormous iron stock-pot, the contents of which form the foundation for many a dish, is a utensil never absent from a Polish kitchen, and the stock itself is made of meat or smoked ham, flavored by beet-roots which have been chopped fine, bottled with water to cover them, and then allowed to stand for two weeks.

Wood fires are used entirely in Poland, though in some kitchens they employ it in its charred form—charcoal—like the French. The black bread of Russia is noted, and the Polish bread is by no means suited to our taste. The Russian peasants make strange use of the oven in which they bake their bread, for they use it for their weekly vapor-bath when there are no bath-houses near.—New York Herald.

#### THE UMBRELLA INDUSTRY.

More than one half of the umbrellas used in this country are produced in Philadelphia, and the distinction of the Quaker City in this respect is no new thing, for it has passed almost into a proverb throughout the United States that "when the Quakers come to town it is going to rain." Very few persons have any correct idea of the extent of the umbrella business in the United States, says the "New York Sun." It amounts in a year, taking the retail figures, to \$25,000,000. There are in this country five hundred umbrella-factories, having an invested capital of \$6,000,000, of which more than \$3,000,000 is in the city of Philadelphia alone. New York, Massachusetts, Maryland and Ohio are the other states which are largely represented in the manufacture of

umbrellas, while all the states are represented, though unevenly, in their sale.

For many years some of the best umbrellas were imported from abroad, especially from England, and the rate of duty upon them, prior to 1890, was fifty per cent ad valorem, if covered with silk or alpaca, and forty per cent if covered with any other material, cotton or linen included. Under the tariff of 1890—the McKiuley Bill, so called—American umbrella-manufacturers were favored by an increase in the duty of five per cent, the rate upon silk and alpaca covered umbrellas being fifty-five per cent, and on those covered with other material forty-five per cent. Since then the importations of English umbrellas have declined, though this change is not to be ascribed wholly to the workings of the tariff, but rather to the fact that American-made umbrellas are decidedly cheaper and quite as serviceable as those imported from other countries. Moreover, they have the additional advantage of being lighter and less cumbersome, and are not constructed to meet the requirements of hard and continuous usage, as is the general custom abroad; for the number of those who always carry umbrellas is materially larger on the other side than it is here. The American plan is to carry umbrellas only when it is raining or seems likely to rain, and it is a matter of common observation in American cities that there are more men who neglect, omit or are unable to get umbrellas on rainy days than there are men who carry umbrellas when the weather is fair. This condition is exactly reversed in most European cities, where it is no uncommon thing to see many umbrellas carried on a bright, clear day. The average rainfall in inches is twenty-five in London, twenty-three in Paris, twenty-four in Berlin, twenty in Vienna, seventeen in St. Petersburg, and forty-four in Glasgow. The average in New York is about forty inches, but the number of days in which there is some rain is larger abroad than it is here.

There are in the United States more than eight thousand persons (the larger number of them men) engaged in umbrella-manufacture, and the total wages paid in a year in this branch of American industry exceeds \$4,000,000. What peculiar merit the city of Philadelphia offers to umbrella-makers is not easily stated. The materials which enter into umbrella-manufacture are not procurable with any unusual advantage in Philadelphia, and the chief market of sale is New York.—Scientific American.

#### THE HIGHER EDUCATION.

Once education meant mainly the acquisition of knowledge. Now it means training of body, mind and character, and all things lovely and of good repute cluster around it. I think this evolution is more noticeable in the women's colleges than in those for men, and the fact singularly illustrates the way in which the world from time to time harks back to old ideals, though always with a difference. What is called the "higher education" of women was at first a revolt against the superficiality of the finishing schools, with their smattering of French and music and manners, and their assumption that a woman must be educated to be agreeable, and agreeable only. We have gone a long way beyond that, and now we come back again to the old idea that women—and not women only, but men, there is that difference—must be agreeable to the eye and to the taste, both ethical and esthetic, as well as to the mind. And now no longer by the prescriptions of a dancing-master, but through the gymnasium and open-air sports, we cultivate that health and strength which the old Greeks well knew lie at the foundation of form and beauty of motion, and even beauty of character. So upon new principles and in new ways we teach the old things; and in all this good, for the first time in the history of the world, men and women share and share alike.—New York Examiner.

#### EYE LANGUAGE.

No part of the human countenance engages our attention so frequently as the eyes. When face to face in conversation we do not look at the lips—although, as a rule, the attention is very quickly taken by any movement—but the eyes of the person with whom we are speaking. So much is this the case that the habit of many deaf people of watching the mouth always strikes us as peculiar. In fact, one usually feels that there is a sense of incompleteness in the association of mind with mind by means of conversation if there is not a continual interchange of glances, making a kind of running commentary on the words spoken. The same may be said of ordinary greetings when two people shake hands; unless there is at the same moment a meeting of friendly looks the ceremony loses much of its meaning.

Now, why is there this continual meeting of eyes accompanying all kinds of human intercourse? Partly, no doubt, it is attributable to certain habits of comparatively recent date. The eye, "the window of the soul," is a more truthful exponent of the inward thoughts than the tongue, and seeing that speech is very frequently used, not to tell the thoughts, but to conceal them, we look to the eye for confirmation or the reverse for what our ears are taking in.—Louis Robinson, in Appleton's Popular Science Monthly.

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## GOVERNMENT WAR-ROOM.

On the walls of the war-room are all the latest maps from the coast and geodetic survey, the hydrographic office and the land office, and some that were made especially for the president's convenience. There are military maps of Cuba, the Philippines, Porto Rico, and all other points, arranged in sections on the wall in such manner as to place before the eyes of the president at one glance the entire expanse of the globe.

On these maps are marked the distances from one point to another; the cable lines, the sailing routes, the time needed to cover them, the places where the ships of the enemy and of the blockading squadron are located from time to time, and every possible sort of information that could be needed during a consultation on the war problem. The most unique of the series of charts are those showing the location of the Spanish and American war-ships, so arranged that they can be changed each hour or minute of the day, as the telegraph may report the movements on the chess-board of the war. Among other conveniences designed for the president there are two boards covered with sheets of paper on which are written alphabetically the name of every ship in both navies. Stuck into a little hole in the space containing the name there is a pin, on the end of which there is a flag bearing the name of the ship. These flag-pins are used for indicating on the map the places where the ships are at that time; the American flags being blue, and those of Spain red.

There is an interesting little corner on one of the boards, separated by a broad black line, inside of which there is a group of red flags huddled together. This corner is labeled "the dead line," and the flags are those that represented the Spanish ships which on May 1st were destroyed by the fleet of Admiral Dewey.

In the left-hand corner of the room, near the entrance from the corridor, is Secretary Porter's desk, where he is at work during many hours of the day and night; and beyond him, nearer the middle of the room, is the desk of Captain Benjamin F. Montgomery, of the signal corps, United States army, who for several years has acted as telegraphic manager of the White House. At the left of his desk, in the corner, there is a wooden case through which pass fifteen special, long-distance telephone wires, and in the opposite corner a cable containing twenty special telegraphic wires, all of which come together at the desk and make it possible for him, without moving outside a radius of ten feet, to have direct communication through the telephone with every department of the government at Washington, including the capitol, on wires which are connected with the White House alone, and over the telegraph and cable lines to every point in the United States and elsewhere, that it may be important for the president or the members of the cabinet to reach at any time in order to give or receive information with regard to the war movements.

Into this war-room, over these special telegraph and telephone wires, comes, every hour and every minute of the day and night, information from a great many sources, official and otherwise, on every conceivable phase of the war problem that could possibly be of interest to the president and the officials of the government. The press associations send all their important news bulletins directly from their office to Mr. Montgomery's desk, and from there they are at once placed before the president at any time during his waking hours. Much of the information that comes is duplicated from various sources, but it is all of the greatest interest, and the president feels that already the war-room has been of incalculable service. Here the cabinet consultations take place, and there is hardly an hour that some of the officials of the government are not studying the maps or reading the official and unofficial news bulletins that pour in over the numerous special wires. Nothing can take place in any quarter of the globe that affects in any way the situation without the president knowing it instantly. The war-room is thus becoming a most important adjunct to the military administration.—Collier's Weekly.

## THE LONGEST SPEECH ON RECORD.

The longest speech on record is believed to have been that made by Mr. De Cosmos, in the legislature of British Columbia, when a measure was pending, the passage of which would take from a great many settlers their lands. De Cosmos was in a hopeless minority. The job had been held back until the eve of the close of the session; unless legislation was taken before noon of a given day the act of confiscation would fail.

The day before the expiration of the limitation De Cosmos got the floor about 10 A. M., and began a speech against the bill. His friends cared little, for they supposed that by two o'clock he would be through and the bill could be put on its passage. One o'clock came and De Cosmos was still speaking—he had not more than entered upon his subject. Two o'clock—he was saying "in the second place." Three o'clock—he produced a fearful bundle of evidence, and insisted on reading it. The majority began to have a suspicion of the truth—he was going to speak until next noon, and kill the bill.

For awhile they made merry over it; but as it came on to dusk they began to get alarmed. They tried interruptions, but soon abandoned them, because each one afforded him a chance

to discuss and gain time. They tried to shoot him down; but that gave him a breathing-space, and finally they settled down to watch the combat between the strength of will and weakness of body. They gave him no mercy, no adjournment for dinner, no chance to do more than wet his lips with water, no wandering from his subject, no sitting down. Twilight darkened; the gas was lit, members slipped out to dinner in relays and returned to sleep in squads; but De Cosmos went on. The speaker to whom he was addressing himself was alternately dozing and trying to look wide-awake.

Day dawned, and the majority slipped out in squads to wash and breakfast, and the speaker still held on. It cannot be said that it was a very logical, eloquent or sustained speech. There were digressions in it; repetitions also. But still the speaker kept on; and at last noon came to a baffled majority, livid with rage and impotence.

And a single man, who was triumphant, though his voice had sunk to a husky whisper, his eyes were almost shut and bleared and bloodshot; his legs tottered under him, his baked lips were cracked and smeared with blood. De Cosmos had spoken twenty-six hours, and saved the lands.—Toronto Globe.

## SPANISH NEWSPAPERS.

Spain is a country of 18,000,000 population, but there are fewer newspapers published in it, daily, weekly and bi-monthly, official, semi-official, secular and scientific, than are published in the single American State of Illinois, which, by the last Federal census, had a population of 3,800,000. And many, if not most, of the newspapers published in Spain are newspapers in name only, for their most distinguishing characteristic is that they do not contain any news, being devoted to what is called "matters in general," or such matters in particular as permit of the publication of the paper any day of the week or any hour of the day, it does not make much difference which.

In Madrid, the capital, a newspaper which has been frequently referred to in the cable dispatches from Spain is "La Epoca," a conservative journal which makes claim to a circulation of 5,000. It is a four-page paper of blanket style, and makes a feature of foreign dispatches—when it gets them. "El Globo," a journal of liberal tendencies, has a much larger circulation, though smaller in size than "El Liberal" or the "Imparcial," two other papers well known to European readers generally who are familiar with Spanish journalism.

The propensity of the Spaniards to indulge in bombastic titles is reflected somewhat in the press of that country. Cadiz, a town having about the same population as Hartford, Conn., has two daily papers, one known as the "Defender of Cadiz," and the other as "Clamor." One of the Madrid papers, a paper almost wholly devoted to allusions to the past greatness of Spain, is called the "Future Century," and two of the papers of Malaga are known respectively as the "News" and the "Future."

A favorite title among the provincial papers of Spain is "Publicidad" (publicity), which can hardly be regarded as a wise selection of title for a country which receives fewer foreign telegraphic dispatches in a week than the city of New York gets in a day, and in which a press censorship exists of so stern a quality as to divest Spanish papers generally of all claim to independence in matters relating to the government.—Newspaperdom.

## PERSONAL GHOSTS.

Ghosts were naturally more numerous in earlier conditions of society, for then man had so many souls. Now we are content with one, and there are some who try to make us doubt even that modest allowance. But in the good old days each person was credited with several. There was one, for instance, which belonged to his body, and must abide in it, or death would arrive; then there was the dream-soul, which, I have said, might wander through time and space at will during sleep; and, most important, said many, is the name-soul—that which gives us distinctive individuality in our personal names; and not to continue the list to a tiresome length, there was the bone-soul, which remained in the bones after the body had passed to dust. The last mentioned was of peculiar value, for on its persistence depended the chance for resurrection into life on earth. The faith in this was high universal. When the body of Elijah touched the dry bones of the long-dead warriors they clothed themselves in flesh and were restored to living beings. The rabbis taught that especially in the bone luz, the last of the spinal vertebrae, dwelt the spirit of the deceased. It is indestructible, say they, and not even a strong man with a sledge-hammer can break it.—Dr. Daniel G. Brinton, in Century Magazine.

Our readers who are thinking of purchasing buggies, phaetons, surreys, etc., should send for the very complete catalogue issued by the Edward W. Walker Carriage Co., Goshen, Ind., whose advertisement appears in another column. Very low prices prevail at present on account of the cutting off of agents' and middlemen's commissions.

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COLLIER St. Louis.  
MISSOURI St. Louis.  
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THERE are several sorts of reputation—good, indifferent, bad. A good reputation is the sort that pays—the only sort that you, as a dealer or painter, can afford to have. It can only be acquired by selling and using the best material. In paint, *Pure White Lead* (see list of genuine brands) and *Pure Linseed Oil* are the best.

**FREE** By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also folder showing picture of house painted in different designs or various styles or combinations of shades forwarded upon application to those intending to paint.

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A member of the New York Seventh Regiment on going to the State Camp at Peekskill, N. Y., took along some Ripans Tabules, believing the change of water and diet would be liable to produce some unpleasant results. The soldiers were awakened at 4.55 A. M., had five minutes to dress in, reporting to the officer in command at 5 o'clock. They were served with bread and coffee and went to drill until 7 o'clock, when a breakfast was served consisting of oatmeal, milk, beefsteak and boiled potatoes. The radical change in his way of living soon affected our friend and his experience was shared by his tent-mate, and they both thereupon had recourse to Ripans Tabules, our friend acting as physician for his companion. The effect the Tabules produced in curing the tendency to constipation and costiveness, and in brightening them up, was so marked that they continued using them regularly thereafter until the supply was exhausted, and then the other soldier telegraphed to New York for more. It was not unusual with them to take three or even four Tabules a day, and it was a regular habit to take at least one every night before going to bed. "I knew," said our friend, "that Ripans Tabules were good for those headaches of mine, and were especially valuable of a morning after having spent a night at a party where dancing was kept up very late, but the way they acted on me and my comrade in Camp was positively surprising. Ripans Tabules have now at least two warm advocates in the New York Seventh Regiment. They were our safety valve."

A new style packet containing TEN RIPANS TABULES in a paper carton (without glass) is now for sale at some drug stores—FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (120 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—or a single carton (TEN TABULES) will be sent for five cents.

**LADIES** I Make Big Wages—At Home—  
and want all to have the same opportunity. It's VERY PLEASANT work and will easily pay \$18 weekly. This is no deception. I want no money and will gladly send full particulars to all sending 2c. stamp. Mrs. A. H. Wiggins, Box 49, Lawrence, Mich.

**SORE EYES** Dr. S. A. Thompson's Eye Water

**LADY AGENTS**  
Desiring a permanently profitable business connection should write immediately for our latest offer. We furnish new material FREE, as needed, and to special ability we accord special rates. Ladies have made \$55 in 58 hours' canvassing. This is a great opportunity. Mast, Crowell & Kirkpatrick, Springfield, Ohio.

## Our Household.

OCTOBER.

BY A. M. MARRIOTT.

It now is October, and sunshine hangs over  
Each hill and each valley the lovely days  
through;  
The wild birds are calling, the ripe nuts are  
falling,  
And the hills in the distance are hazy and  
blue.

The oak-trees are crimson, and golden the  
maple;  
The purple grape-clusters hang full on the  
vine;  
The orchards are bending with fruits that are  
sending  
Out odors that Arabia's spices combine.

The measureless ocean of ether above us  
Is dotted with tiny white sails o'er the blue;  
Or can each be a fairy, so light and so airy,  
As, borne on a zephyr, they vanish from  
view?

The cobwebs that float in the soft air about us,  
Were they telephones reaching from earth  
to the skies,

Oh, dear ones who love us, though now far  
above us,

What fond, loving messages to thee would  
arise!

But who can be sad when the dear world  
around us

Is covered with beauty and crowned with  
good cheer?

Bid farewell to sorrow, take hope for the  
morrow,

O royal October, thou art queen of the year.

### HOME TOPICS.

**LAMB-CHOPS.**—Butchers call all chops  
from an animal not more than a  
year old lamb-chops. If they are  
not strictly lamb-chops do not broil  
them, but trim off all the fat, except the  
little that lies next to the meat on the in-  
side of the chop, season them with salt  
and pepper, and lay them in a smoking-hot  
frying-pan; turn often until they brown,  
then pour in a cupful of boiling water,  
cover closely, and set where they will cook  
slowly for an hour. When they are cooked  
in this way they will be very tender and  
juicy.

**CREAMED CELERY.**—In the cool days of  
autumn a hot dish is relished for supper  
or luncheon, if the dinner is the last meal  
of the day, and creamed celery is nice served  
with cold turkey or chicken. Take one  
stalk of celery, scrape it clean, cut it into  
cubes, and boil it in a little water until  
tender; let the water nearly all cook away,  
then add a cupful of cream or rich milk,  
and when it comes to a boil season with  
salt and a little pepper, thickening with  
a teaspoonful of flour rubbed smooth in a  
tablespoonful of butter. This is also nice  
served on nicely toasted slices of bread,  
making celery toast.

**CONSTIPATION.**—In answer to Mrs. M. S. A.  
I would say constipation is dangerous at  
any time in life. My first baby was  
troubled in the same way that hers is. For  
weeks I gave him an enema of tepid  
water every morning as regularly as I  
washed and dressed him. At last a friend  
with more experience than I had told me  
to try giving an enema of about a table-

move regularly without assistance. I con-  
tinued the evening enema and morning oil-  
rubbing for several weeks, stopping the  
enema first, and he was never again  
troubled with constipation. Regularity of  
the bowels depends in a great measure on  
baby being fed regularly at stated intervals,



and he should be given several times a day  
a spoonful of cool (not cold) water which  
has been boiled. Babies need water as  
much as grown people, and often suffer for  
want of it.

**AMUSING LITTLE FOLKS.**—What mother  
has not heard the oft-repeated question,  
"What can we do now?" and been put to



her wit's end to find something to keep the  
little folks happy and busy and out of  
mischief or harm's way? A little mother  
that I know says there is a positive mine  
of amusement in a box of toothpicks. At  
first the children made roads and fences,  
log cabins and pig-pens of them; at last,  
remembering the peas work of the kin-  
dergarten, a happy thought struck her;  
taking the box of picks, she called them  
out under the crab-apple tree, and sticking  
picks into a crab-apple for legs and a tail,  
with shorter pieces for horns, she called it  
a cow. The children were delighted, and  
for two hours they made animals of all  
sorts. As long as crab-apples lasted they  
did not tire of the amusement, and after-  
ward used little potatoes instead, with  
which they were even more delighted, as  
they could make animals of different sizes  
and shapes with them, and furnish them-  
selves with a whole menagerie, from a  
mouse to an elephant. MAIDA McL.

### COMPOSITE FRUIT PRESERVES.

Experienced housewives have long  
known that a delicious-flavored jelly is  
made of two parts red currants and one  
part red raspberries, but it is only within  
the last year or two that we have set our  
wits to devising other pleasing fruit com-  
binations in preserves. Perhaps the main  
cause of this "awakening" is the added  
appreciation now given to marmalade.  
Be that as it may, no preserve is more  
popular, and in no other way can the

flavor of two or more kinds of fruit be  
more effectively combined.

**CRAB-APPLE AND PLUM MARMALADE.**—  
If possible, procure the dark-red Siberian  
apples and Bradshaw or other violet-red  
plums. Allow two parts apples to one part  
plums. Wash and drain the fruit, stem  
the plums, and stem and cut out blossom-  
ends, black spots and knots from the  
apples. Cover the former with double  
their measure of cold water, cover closely,  
and simmer until soft. Drain off the clear  
liquid, and return to the fire with the  
apples; cover closely, and stew until they  
can be easily pierced with a fork. Rub  
both kinds of fruit through a coarse sieve,  
but do not be overeconomical with the  
apples. Allow one pound of granulated  
sugar for every pint of fruit pulp; put the  
former in the oven to heat, and the latter  
over the fire in a porcelain-lined or granite  
kettle; cook, uncovered, twenty minutes  
after it commences to boil, stirring almost  
constantly with a wooden ladle, to prevent  
it adhering to the bottom of the vessel.  
Then pour in the hot sugar, stir until thor-  
oughly dissolved, skim off the white foam  
that rises, and boil thirty minutes longer,  
stirring very often. Pour into wet molds,  
let set until cold, cover with melted paraffin-  
wax, and keep in a cold, dry place.

KATHERINE B. JOHNSON.

### PRETTY PATRIOTIC DESIGNS.

The illustration of the sofa-pillow needs  
very little description. It can be made  
of denim or any suitable material. The  
cover of the cushion is of blue, with  
the stars of white cloth buttonholed on in  
white linen floss. The ruffle can be made  
of red and white striped denim or red  
denim with two rows of white tape or  
braid stitched on.

The design for shaving-  
paper is made of water-col-  
ored paper, with the flags  
and lettering in the proper  
colors. The bow is of red,  
white and blue striped rib-  
bon. Add a quantity of  
white tissue-paper and a  
card-board back the same  
size. Fasten these all to-  
gether by running a wire  
hook through, the wire hav-  
ing a hook at the back by  
which to hang it up.

We shall always need  
something to hold pins, so I  
give a design which makes  
up very prettily. It is made  
like any pin-ball, with two  
pieces of cardboard covered  
and sewed together over and  
over on the edge. Red and  
white ribbons are sewed  
together for the stripes, and  
a blue piece of ribbon on  
which the stars are em-  
brothered in white filo floss.  
This is suspended with red,  
white and blue striped rib-  
bon.

The match-holder also makes a useful  
present for a gentleman. This is made of  
a piece of water-colored paper seven by ten  
inches, and is pasted on cardboard to make  
it firm. Get a pretty rustic pipe, tie onto  
the card with a bow of red, white and blue  
ribbon, paint the lettering in red (any  
other wording may be substituted) and  
the matches in light wood color,  
with red tops. Paste on the  
shield-shaped sandpaper, and  
use the narrow red, white and  
blue ribbon by which to hang  
it up.

The needle-book is made of  
the woven flag ribbon two and  
one half inches wide, taking one  
flag for each side, lining with  
red silk, and putting in the usual  
pieces of pinked flannel for  
needles. Sew the edges over and  
over and fasten with two red  
bows at the back. Add also  
the two ribbons with which to  
tie it.

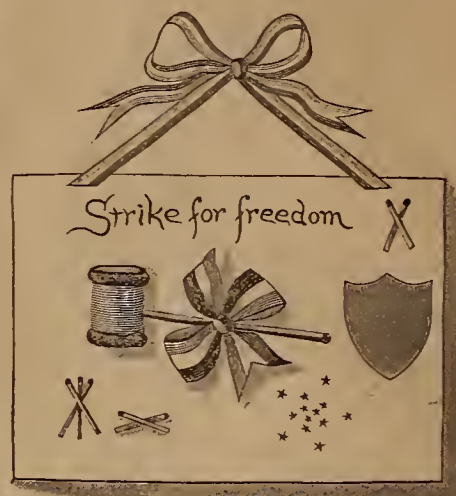
The round match-scratcher is  
made of water-colored paper,  
on which the little figure is  
painted. The dress might be in  
blue and the lettering in red.  
The ribbon on this is also in  
red, white and blue, and the hat in red.

LENA J. RINGBERG.

"Our people here," writes Mr. H. P.  
Green, East Troy, Pa., "think Peerless At-  
las and other FARM AND FIRESIDE or the  
WOMAN'S HOME COMPANION one year, all for  
one dollar, the greatest bargain ever offered.

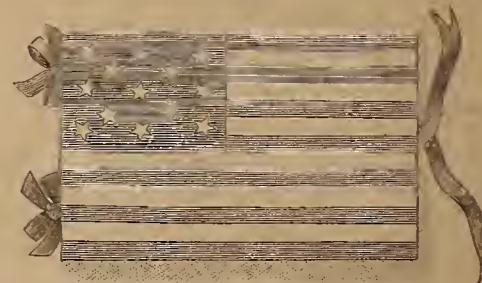
### FAMILY LICENSE.

We have all experienced it in its various  
forms, from gentle remonstrance to brutal  
frankness. No criticisms are so candid, so  
despairingly candid, as those which are  
proffered unasked by the members of our  
immediate family and by our relations in



general. No criticisms are less tempered  
with leniency and partiality and possess  
less sugar-coating than these.

Frankness, it is true, is to be desired, but  
there is a limit even to frankness, or rather  
there is a choice as to the way in which it  
is thrust upon one. Of course, it is only  
right that perfect freedom should exist in  
the family, but there should be a limit to  
this freedom just as there is a limit to the  
freedom among dear friends. There may  
be deep ties of friendship and love existing  
between friends, but there is still an un-  
written law of etiquette or kindness, call  
it what you will, which draws a fine but  
firm line between kindly interest in any  
special trouble or special pleasure and  
the step beyond, which is impertinent  
curiosity. We recognize this line plainly;  
it indicates so far and no farther, and we  
have no wish to go beyond it, no wish to  
even appear to pry into what may be sacred.



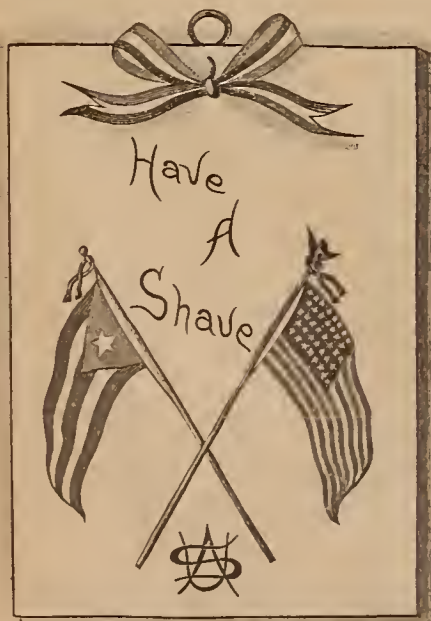
This line, as I have said before, is dis-  
tinctly felt between friends and acquaint-  
ances, but, unfortunately, it is often not  
recognized in the home life. The kindly  
interest oversteps the line and becomes  
mere interested curiosity, and helpful  
frankness becomes irritating officiousness.

These terms may seem harsh to apply to  
members of one family or relations in  
general, but who has not seen instances,  
not necessarily personal ones, where this  
family license was shown by taunts, jokes,  
questions and laughter, and which, even  
though not meant in earnest, carried as  
deep a sting, if not deeper, because of the  
relationship. I do not think unkindness  
is usually meant in such cases; it is simply  
a lack of thought. Our sense of freedom  
from restraint makes us forget that some  
of us are sensitive or reticent or nervous,



and we thoughtlessly wound and cause  
hard feelings. While perfect freedom  
should be encouraged in the home, license  
should not. There should be a happy dis-  
crimination between the two, and wise  
parents should teach this distinction early.

EMMA LOUISE HAUCK ROWE.



spoonful of tepid water just before he  
went to sleep at night, and let him keep it.  
I did this, and also rubbed his bowels  
gently in the morning with a little pure  
olive-oil, using a "round and round" motion  
with the palm of the hand. After a few  
days of this treatment his bowels would

## SUMMER PLEASURES.

The five-o'clock tea seems to have naturally transformed itself into a lawn party. This is in answer to the weather's demands and in obedience to the need of summer guests. Any one who enjoys the possession of only a few trees may utilize them for a lawn party.

One on the Fourth of July proved itself a good time for such an entertainment. The hostess remembered the Fourth of July thunder-shower, so called it a twelve-o'clock breakfast. There were eight trees in the inclosure. She used them thus: She had tent-cloths stretched over each table, of which there were three, for it was a red, white and blue breakfast. The first was red, of course. The snowy damask linen, with its center-piece of red roses, and small vases, with one, two or three fine roses in them, set here and there, were very beautiful. This had the most delicious sandwiches of cheese and egg, of hain, tongue and the finest minced chicken in abundance, olives, capers, Neufchatel cheese and the most appetizing home-made pickles on small cut-glass plates. There were also numbers of small forks for use in any way. The coffee hot in an urn at one end and the tea at the other were also very inviting, and were served by young ladies with red, white and blue trimmings on their pure white dresses. It was a picture in itself. This was the substantial part of the feast.

The second was the white table. A center glass bowl was filled with iced tea—slices of lemon and orange and a large lump of ice making it very inviting for such a hot day; filled glasses stood around it ready for serving, and the purest and prettiest white flowers were bunched, tied with white ribbon, and ornamented the corners of the table. All kinds of cake, home-made and confectionery, were very good and attractive to the dainty beaux and belles.

The third was the blue table. The flowers were the blue cibicory, found plentifully by the wayside in almost every country place. They were pretty in glass vases and bowls, a fine feathery grass and ferns adding to the beauty. This was the dessert table. Glasses of Southern sillibub were in six places in clusters, and were quite a favorite; flour-wafers were helped with these, and were, as the younger girls said, "so good." Candy from choice confectioneries in abundance, yet the home-made chocolate caramels were not neglected, indeed, were in demand, and plain chocolate candy was delicious. On this table were carafes filled with ice-water, and around each a circle of medium-sized glasses, which were never still or in their places, except when just put down by one having used it. This was a beautiful table. A dainty satin bow, just the shade of the flowers, on the handle of the little silver dipper added to the appearance of it all very much. This was in the bowl of plain iced lemonade.

Young ladies acting as ushers were dressed in the color of the table where they served. This was one of the most inexpensive and yet simply beautiful entertainments this summer, given in a suburban resident's home. It was also pronounced very enjoyable. The piano was rolled out on the piazza, and volunteers from among the guests played and sung delightfully, and for the finale all joined in "The Star-Spangled Banner." Any of us could have such a breakfast or tea as this, and give and receive so much pleasure.

It does seem almost a pity that this form of entertainment has supplanted the good times that our mothers and grandmothers tell us of—the old-fashioned tea-drinkings that were the style in their young days. Husband and wife came together in the afternoon, and at half-past six all were invited to the dining-room; seats for each were arranged, but no card to assign them. Each husband sat beside his wife, and served her and then himself. The tables were filled with salads of all kinds, croquettes of chicken, etc., cold sliced ham, tongue and roast beef, home-made pickles, sweet or sour, and flaky biscuits made by the hostess' own hands, whose pride it was to see her guests enjoy them. I remember that my mother was noted for her potato-biscuits and chow-chow pickles.

From these present entertainments our fathers are excluded, for they are ladies' lunches and teas, and theirs alone. This is surely no improvement on the old time. That preserved, or attempted to do so, family union and affection, and the whole

family enjoyed together the talking over at the breakfast-table of the lovely time of the night before. Let us imitate them and revive those happy days and sociable times. HOPE HOLIDAY.

## VENETIAN LACE.

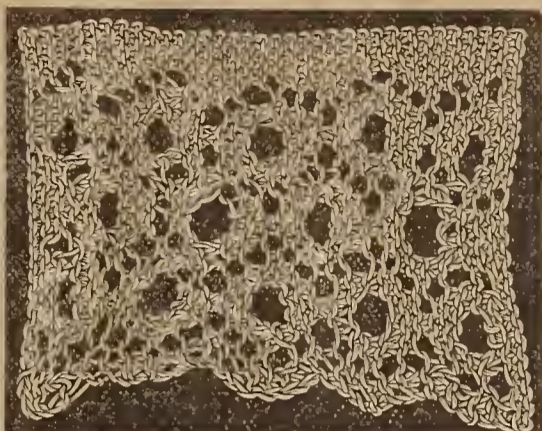
ABBREVIATIONS:—Sl, slip; k, knit; n, narrow; o, over; p, purl; b, bind.

Cast on 22 stitches; knit across plain.

First row—K 2, o, k 5, o, n, k 1, n, o, k 5, o, n, k 3.

Second row—K plain, as all even rows.

Third row—K 2, o, k 1, n, o three times, sl, n and b, k 1, o, sl, n and b, o, k 1, n, o



three times, sl, n and b, k 1, o, n, k 2.

Fourth row—K 7, p 1, k 9, p 1, k 6.

Fifth row—K 1, n, o, n, k 3, n, o, k 3, o, n, k 3, n, o, k 4.

Sixth row—Same as second row.

Seventh row—K 1, n, o, n, k 1, n, o, k 8, n, k 5.

Eighth row—K plain.

Ninth row—K 1, n, o, sl, n and b, o, k 1, n, o three times, sl, n and b, k 1, o, sl, n and b, o, k 6.

Tenth row—K plain.

Eleventh row—K 2, o, k 3, o, n, k 3, n, o, k 3, o, n, k 4.

Twelfth row—K plain. L. A. PERKINS.

## THE KITCHEN CLUB.

## BREAD.

"We had supper early, and there was a panful left, piping hot, and I know you folks don't eat until about six, so I fetched 'em."

It was biscuits Mrs. Tinkham referred to—a blue plate just towering with great puffed-up brown rounds, with crispy, crumbly looking crust that suggested plenty of shortening.

"And a mighty fine thing for me you did, Peggy," sister Dorinda said, scooting into the dining-room with them, where the table was set for the six-o'clock dinner, "for I didn't have a speck of time to make any, and my light bread has dwindled so I was afraid it would be skinchy, let alone George isn't overfond of light bread."

"Soda!" came in a highly disapproving voice from the doorway, where Miss Tildy Pettibone suddenly loomed up, with her sunbonnet in one hand.

"Don't care if they are soda," defended

Peggy Tinkham, briskly, "ain't a mite too much in 'em. I don't get my biscuits streaky once a month; but if they were choke-full of soda they wouldn't be any worse for you than yeast-bread."

"Now, Peggy Tinkham, that's just like you," wrangled Miss Tildy, "you ought to know full well raised bread is the only kind that should be eaten."

"Theory! And like a heap of other theories," sniffed Peggy. "Why, my Jim had dyspepsy all the time before we were married, and he lived with his aunt; she never had any other kind but 'riz' bread, and the poor fellow was miserable; and after we were married and I fed him good soda-bread three times a day he never heard a peep from dyspepsy."

"Well, Peggy does make mighty fine biscuits," cut in Dorinda, knowing Peggy and Miss Tildy would nearly come to blows if she didn't get in between. "How do you do it, Peggy?"

"Good red-wheat flour—whole wheat if you like—lots of sour milk, just enough soda; make the dough soft, put in a good bit of shortening (I use bacon gravy), have your oven right, and there you are," said Peggy.

"Heat your oven three times a day and cook yourself!" snorted Miss Tildy.

"What's the matter with a gasoline-stove oven?" retorted Peggy.

"But, Peggy, I've seen you bake biscuits on the top of the stove," said Dorinda, "and they were elegant."

"Sure," said Peggy; "that's no trick. If you don't want to heat your oven, roll

your dough out in cakes the size of a batter-cake, have a skillet hot, with some grease in it—"

"Grease!" A disgusted echo from Miss Tildy.

"It needn't be soap-grease," announced Mrs. Tinkham, with dignity, "it can be good sweet bacon fat or butter if you like. But have it hot, put in your cake of dough, move it back so as not to be too hot, and cover it with a lid; when it gets a nice brown on one side, turn it over and bake on the other side. If you want little biscuits you can cut them out with the cutter and cook the same way."

"And mighty good they are, too," said Dorinda. "Whatever Peggy's sins are about batter-cakes she's tiptop at biscuits. I'd make them oftener myself if it wasn't for the bother."

"Tain't so awful much bother," said Peggy. "You needn't mix up dough every meal. In the winter-time the dough will keep good from one meal to the next, and in warm weather let it get sour, if it wants to, then work in some more soda dissolved in just a little bit of warm water, mix it through carefully, and if you do it right your biscuits will be as light as so much milkweed-cotton."

"Girls," then proposed Dorinda, "why couldn't we have a little three-cornered kitchen club of our own, to discuss cooking things? You, Miss Tildy, and Peggy Tinkham have such totally different ideas I always get something new out of both of you. Let's all meet here Wednesday afternoon and have a little talk about cooking."

"I don't mind," said Miss Tildy.

"Neither do I," said Peggy, "if you'll always let us sit in the kitchen and come in our Hubbards and sunbonnets?"

"Of course," agreed Dorinda; "and sister Priscilla can be the secretary and take down notes, for she doesn't know any more about cooking than that paper mandarin on the shelf, and couldn't be of any use in that direction."

Her coffee boiled over here, and she had to chase after it, so the other members of the new club departed.

PRISCILLA PIPER.

## ARLETTA LACE.

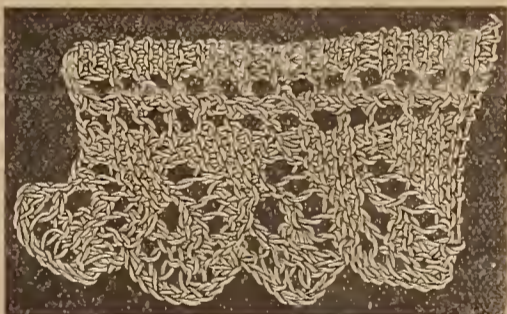
ABBREVIATIONS:—Sl, slip; k, knit; n, narrow; o, over; p, purl; b, bind.

Cast on 13 stitches; knit across plain.

First row—Sl 1, k 2, o, n, o, n, k 1, o, n, o three times, k 1, o, n.

Second row—K 4, p 1, k 11.

Third row—Sl 1, k 8, o, n, k 3, o, n.



Fourth row—K 16.

Fifth row—Sl 1, k 2, o, n, o, n, k 3, o, n, k 2, o, n.

Sixth, eighth and tenth rows—K 16.

Seventh row—Sl 1, k 10, o, n, k 1, o, n.

Ninth row—Sl 1, k 2, o, n, o, n, k 5, o, n, o, n.

Eleventh row—Sl 1, k 12, sl 1, n and b 1, o.

Twelfth row—B off 1, k 12.

Repeat from first row. L. A. PERKINS.

## CORN.

CANNING CORN.—Cut the corn off the cob, and to every thirteen tincupfuls of corn add one tincupful of salt; put into a kettle, with enough water to cover, and boil for fifteen minutes, then seal.

CORN IN BRINE.—Cook the corn on the cob, cut off, and to every tincupful of corn add one tincupful of salt; mix well, and pack in a crock, then put a heavy weight on it.

CORN SAUCE.—This requires twelve ears of corn, two heads of cabbage, cut fine, one tablespoonful of celery and mustard-seed, one teacupful of sugar, one half cupful of salt and enough vinegar to cover. Cook one hour, then seal.

These recipes have been tried, and have been found an easy way of putting up corn. MRS. MINNIE FARMER.

"So far I have sold Peerless Atlas to nine persons, out of every ten that I have canvassed," says Mrs. Viola A. Siemer, Los Angeles, Cal., "and am absolutely certain I can nearly or quite maintain that rate throughout. I used 30 Atlases immediately."



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## Our Household.

### THE CONFESSIONS OF LITTLE WILLIE.

Pa says they ain't no spooks at all, Ni s'pose he ought to know,  
'Cause he knows nearly everything worth knowin' here below;  
He says 'at only fraidy calfs believes they's ghosts around,  
For people can't git back on earth when you put 'em underground.

I don't believe in spirits when the sun is sb-in' bright  
And I can hear folks talk or they's a livin' thing in sight,  
If they is jist a cat or dog around me I'm prepared  
Fer anythin' 'at comes along, and ain't a bit a-scared.

But sometimes I come home from school when ma's away, and then  
I go a-sneakin' up the stairs, and then sneak down again,  
And think I'll find the doughnuts or the raisins or the jam—  
And then I hear somebody step—or a door shuts with a slam.

I know as well as I'm alive they ain't nobody there,  
But shivers creep along my back, and I can feel my hair  
Raise right straight up and stand as stiff as bristles on my head—  
And I believe in ghosts in spite of all pa ever said.

I dassent turn around and look, for I'm afraid I'll see  
Some big white thing without no head a-standin' back of me—  
But after while I whistle or else I sing, and then  
Go out and run around the yard and git braced up again.

And when it's dark at night, and I wake up and lay in bed,  
I can't keep ugly thoughts of ghosts from gittin' in my head.  
And then I hear pa snorin', and my blood gits froze, almost,  
For every snore sounds like the groan of some poor sinner's ghost.

Pa says there ain't no ghosts, and I talk big, sometimes, and laugh  
At Eddie Gray 'cause he believes, and call him fraidy calf.  
But when I do bad things and then am all alone, by Jinks,  
I know they's ghosts a-snoopin' round, in spite of what pa thinks!

—S. E. Kiser, in Cleveland Leader.

### LAUNDERING LACE CURTAINS.

It is not usually convenient for farmers' wives to send their lace curtains to the laundry, and as they become soiled after using them a few months it becomes necessary to learn to do the work at home. The following method is an easy one, and after giving it a trial I feel sure that any housekeeper would find it more satisfactory than to trust them to the tender mercy of the ordinary washerwoman:

Take the curtains down carefully, remove all the pins or small rings that have been used to keep them in place, and shake them thoroughly to remove the dust. If there are any broken places they should be darned with fine thread before they are put into water, for very small rents are apt to become large holes during the laundering process, unless they are carefully mended. Prepare half a tubful of hot water, adding a little borax and enough soap to make a strong suds. Let them soak in this half an hour, then rub gently between the hands and work them up and down until the water looks dark. Pass them through the wringer, being careful to keep them from catching on a nail or screw or tearing in some way. Two suds prepared in the same way are usually needed to get them clean. The borax saves the curtains by lessening the amount of rubbing to get them clean, and should always be used for washing anything that requires careful handling, for it does not injure the finest fabric. Rinse in clear water, then dip them in a thin boiled starch that is slightly tinged with blue, if a clear white is desired. Saffron-tea added to the starch will make them a delicate cream color, or cold coffee will give them an ecru tint.

A frame for drying curtains may be purchased for a reasonable price, or a very good one can be made at home after the style of the old-fashioned quilting-frames. But while they are very convenient they are not indispensable, for the curtains can be nicely dried without them. Cover the carpet in a room that is not in general use

with clean sheets, stretching them smoothly and tacking them to the floor. Spread the curtains out on them, being careful to have them straight, and pin each scallop to the sheet. Open the windows, so they will dry quickly. They will not need ironing, for they will be free from wrinkles and have the appearance of new curtains.  
E. J. C.

### ARRANGEMENT OF THE HAIR.

Elaborate hair arrangement is intended only for dress occasions, but at those times it is convenient to know how to dress it oneself.

In Fig. 1 the hair is divided from the tip of the ears to the crown of the head. A roll to produce a pompadour is laid in the hair, and it is then tied and brought up, twisted, fastened, and the ends puffed on kids and fastened back of the pompadour.



FIG. 1.

roll. A small roll is put in the back or the hair is waved on waving-irons and brought up in a loop and carried around it; or this can be of loose hair already arranged on a pin, and the hair on the head carried around it. A large comb is then put in the back hair below the knot.

In Fig. 2 the hair is a group of puffs and waves. To make neat puffs use black-cap wire to roll the hair on, as you can more readily use the wire hairpins in it. If you have a becoming way of arranging your



FIG. 2.

hair, keep it, and make it a little more elaborate by the introduction of puffs, and a small group of curls at the back of the neck. Beautiful hair is a charming adornment. If you have a very heavy suit of hair it is more becoming to braid it and make it cover the entire back of the head. Never give up a becoming style for a fleeting one, for hair accustoms itself to one way and does not like changes. REX.

Pneumonia follows close in the wake of damp, changeable weather. Combat its first symptoms with Jayne's Expectorant.

## "Lend a Hand!"

is the cry of women whose housework is beyond their physical powers. Such women need to know that all cleaning is made easy by

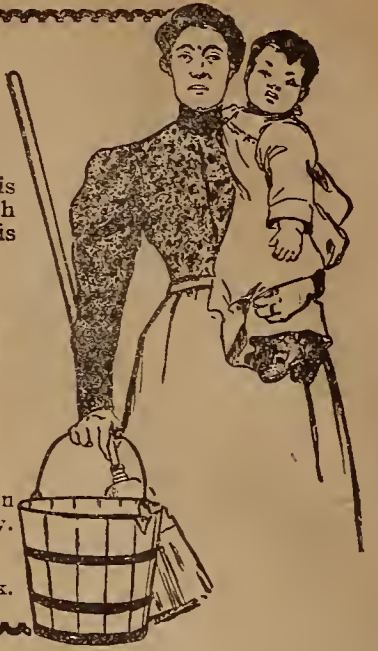
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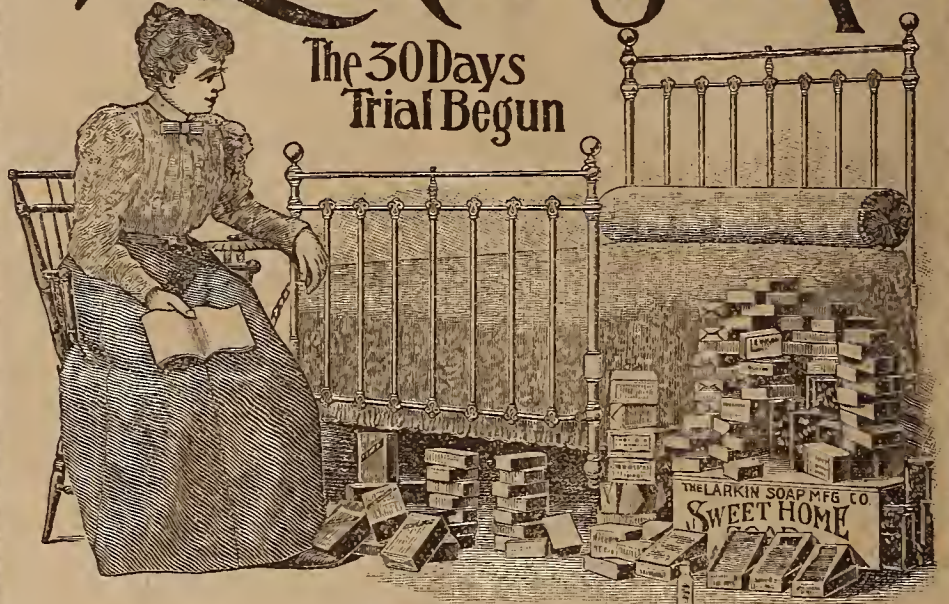
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## The Larkin Plan

saves you half the retail cost of your soaps, and doubles the purchasing value of this 50 per cent. saving in a premium bought for your below usual cost of making. One premium is **A White Enameled Steel, Brass-Trimmed, Bow-Foot Bed.** Metallic beds add beauty and cheerfulness to the chamber, while they convey a delightful feeling of cleanliness that invites repose. They harmonize perfectly with furniture of any wood or style. Brass top rod at head and foot, and heavy brass, gold-lacquered trimmings. Malleable castings that never break. Detachable ball-bearing casters, 4½ or 4 or 3½ feet wide. 6½ feet long. Head, 4½ feet. Foot, 3½ feet high. Corner posts, 1 inch in diameter. Very strong and will last a lifetime.

AFTER THIRTY DAYS' TRIAL if the purchaser finds all the Soaps, etc., of excellent quality and the premium entirely satisfactory and as represented, remit \$10.00; if not, notify us goods are subject to our order. We make no charge for what you have used.

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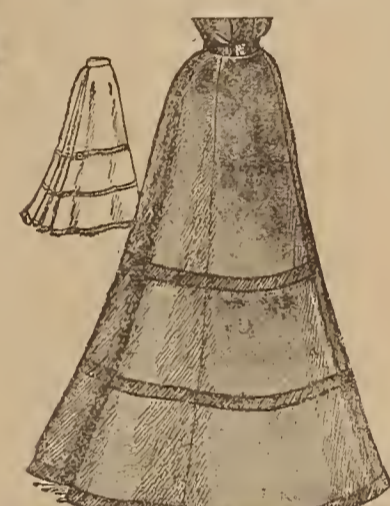
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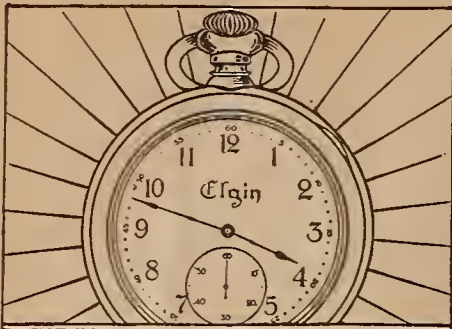
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sleeplessness, languor and the thousand and one symptoms of disordered digestion. Mr. Judson A. Stanion, the great Church and Sunday School worker and president Christian Endeavor Union, St. Louis, Mo., says:

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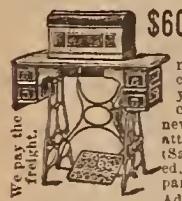


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## Our Sunday Afternoon.

### UNBELIEF.

There is no unbelief.

Whoever plants a seed beneath the sod,  
And waits to see it push away the clod,  
He trusts in God.

Whoever says, when clouds are in the sky,  
"Be patient, heart, light breaketh by and by,"  
Trusts the Most High.

Whoever sees 'neath winter's friend of snow  
The silent harvest of the future grow  
God's power must know.

Whoever lies down on his couch to sleep,  
Content to lock each sense in slumber deep,  
Knows God will keep.

Whoever says, "to-morrow," "the unknown,"  
"The future," trusts the Power alone  
He dares disown.

The heart that looks on when eyelids close,  
And dares to live when life has only woes,  
God's comfort knows.

There is no unbelief,

And day by day and night, unconsciously,  
The heart that lives by faith the lips deny,  
God knoweth why.

### A WISE RETICENCE.

THE man who knows when to keep silence has in his possession the golden key which unlocks one of the doors to secret happiness. Many persons know when to speak; few know when to say nothing. Each of us has moments of what the French calls *epanchement de coeur*, when alone with a friend, and often at these times we are so far left to ourselves as to breathe forth a confidence that, in days to come—perhaps in a few moments—we would give much to have unspoken. Not that our friend will betray our confidence. That is the last thing we think of. But when we share a secret it has passed once for all from our possession, is ours alone no longer, and this knowledge robs it of its sweetness. Then, again, the thought that was to us most precious may be received by our confidante with kindly and good-natured tolerance. To the average mortal good-natured tolerance is simply maddening. It is equivalent to patronage, which turns the milk of human kindness into biting acid. Therefore, when in the fullness of the heart one imparts a tender confidence and does not meet the expected response, there is a feeling of bitter disappointment that is hard to bear. The lovely secret was the pearl which we have cast before swine. We pick it up and try to fancy it is not injured, but it will never look the same after it had once been trampled upon.

A dear woman whom years of experience have ripened and sweetened says, "I have often been sorry for what I have told; I have never repented what I have kept to myself."

Would not that sentence be a safe one for many of us to keep in mind in the evil moments when the desire to "talk out" that which lies nearest our hearts presses strongly upon us?

It is so much easier to keep a cherished secret than it is to take it back after it has once gone from us.—Harper's Bazar.

### TAKE CARE OF YOUR MONEY.

Never part with a dime without regard to the returns. Invest wisely. Our question should be, "How can I get the most out of this dollar?" I can burn it up in cigars or bank it at four per cent. With it I can minister to the flesh or so use it as to help my body and soul and the bodies and souls of my neighbors. That man wasn't so far out of the way who, dealing with a spendthrift, declared that he would as soon spill his blood foolishly as to waste his money on non-essentials. Did you ever think of the great power of "heels" to make a strong bank account and a robust body? An hour, morning and evening, in the open air, walking to and from business, is no great hardship for any well-preserved man under seventy. We walk too little and ride too much. Walking has two credits; namely, better health and larger cash balances. Try it.

The spending folly makes one shabby and hungry. Have you proved this yet? Your finger in the fire once is quite enough; don't put it there again. The worst of all sights on this earth is the man who mortgages himself over, a slave to the rum-seller or to any other servant of the world, the flesh or the devil.—New York Weekly Witness.

### THE HARVEST.

Months before the time of harvest estimates as to its size are made and published. Movements in the business world are made on these prospects, and activity or depression prevails according to the outlook before the actual fruit of the farmer's toil has begun to appear in the markets. A panic may be the result of a short crop, and the effect may come before the cause, instead of following it. Trade will be brisk on the mere probability of a large yield, although there may still be room for many uncertainties.

The opening of the year of church-work is not generally regarded as the time of harvest, but as the weeks of preparation. But the plowing and the sowing must be done in hope if large results are to be gained. To these efforts fresh energy and zeal are brought in view of the need. But why should we not bring to them also the enthusiasm and cheer that come from the prospects of a generous harvest? There will be more for which to be grateful at the end if the work from the first is done in the spirit of thanksgiving.

But the farmer's crops are not large every year; business ventures cannot safely be made on the basis of the harvest until there are some signs as to the result. How can we tell what the church's harvest is to be in the coming season? It will be according to God's promises, and that means that it will be according to our faith. The way to large returns in this field is to assume that they are coming. The farmer's wish alone, the business man's speculation, will not assure the needed sun and rain to make the earth bring forth; but earnest effort, the prayer of faith and the expectation of large answers themselves supply conditions making it sure that the bountiful sower shall gather bountiful fruit unto life eternal. Our counting now on the spiritual harvest to come will largely decide what the harvest shall be.—Christian Endeavor World.

### PROMPT PEOPLE.

Don't live a single hour of your life without doing exactly what is to be done in it, and going straight through it from beginning to end. Work, play, study—whatever it is, take hold at once, and finish it up squarely; then to the next thing without letting any moments drop between. It is wonderful to see how many hours these prompt people contrive to make in a day; it is as if they picked up the moments which the dawdlers lost. And if ever you find yourself where you have so many things pressing upon you that you hardly know how to begin, let me tell you a secret: Take hold of the very first one that comes to hand, and you will find the rest all fall into file and follow after like a company of well-drilled soldiers; and though work may be hard to meet when it charges in a squad, it is easily vanquished if you bring it into line. You may have often seen the anecdote of the man who was asked how he had accomplished so much in his life. "My father taught me," was the reply, "when I had anything to do to go and do it." There is the secret—the magic word, now! Make sure, however, that what is to be done ought to be done. "Never put off till to-morrow what you can do to-day," is a good proverb, but don't do what you may regret.—Merchant Sentinel.

### KNOW YOUR BIBLE BETTER.

There is a story told of a man who, when asked to name the last book of the Bible, promptly answered, "The Psalms." His mother had used a copy of the New Testament and the Psalms bound together; and his study of the one book had never been close enough to teach him any other order. We knew of a minister of the gospel who was sorely distressed on one occasion because he could not recall a certain verse in the second chapter of Jude, to which he had been directed by a facetious opponent in debate. These may be extreme cases, but the fact is that none of us know the Bible as well as we should. There are few warriors of God who know how to handle "the sword of the Spirit" in truly soldierly fashion.—Outlook.

### COME AND SEE.

"If thou wouldst know a poet go and live in the poet's land." If you would know Christ or the satisfaction and blessedness which he can impart make your appeal to Christian experience. A true knowledge can come in no other way.—Baptist Union.

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when applied, is most BRILLIANT, and that is the effect you want when using a stove polish. When an old stove is polished it should look as bright as new—that is the result when you use Enameline. It is put up in paste, cake or liquid form. Remember that every package is guaranteed.

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Smiles.

THE BEST DISH OF ALL.

I'm very fond of partridge broiled, of luscious squab and quail; And ruddy ducks, when I am blue, to cure me never fail; And canvasbacks are my delight, my soul with joy they fill When I can eat them knowing that another pays the bill.

I love the gobbling turkey, too, with stuffing rich and sweet, And tender chickens nicely broiled I deem a very treat; A nice green goose with apple sauce is grateful to my taste, And I could eat it till I grow quite conscious of my waist.

The soaring eagle in the skies appeals unto my pride, For I'm a Yankee born and bred to my inmost inside; And in the vocal powers of the nightingale so rare I take a pleasure that is not exceeded anywhere.

But spite of all my love for these fine-feathered friends of man, The birds I've loved the most of all since I this life began, I've dropped them all to hail with cheers I pray may never cease, The coming of that glorious bird, the White-winged Dove of Peace!

—Harper's Bazar.

AN IRISHMAN'S DESCRIPTION OF THE PHILIPPINES.

I've been re-readin' about th' country. 'Tis over beyant ye'er left shoulder whin ye'er facin' east. Jus' throw ye'er thumb back an' ye have it as ac'rate as anny man in town. 'Tis further thin Boohlgarya an' not so far as Blewchoochoo. It's near Chiny, an' it's not so near, an' if a man was to bore a well through fr'm Gosben, Indiany, he might sthrike it, an' thin ag'in he might not. It's a povetry-sthriken country, full in goold an' precious sthones, where the people can pick dinner off th' threes an' ar-re starvin' because they have no step-ladders. Th' inhabitants is mostly naggers an' Chiny-men, peaceful, industrus an' law-abidin', but savage an' blood-thirsty in their methods. They wear no clothes, except what they have on, an' each woman has five husbands an' each man has five wives. Th' r-rest goes into the discard, th' same as here. Th' islands has been owned by Spain since before th' fire, an' she's threatened thim so well they're now up in ar-rms ag'in her except a majority iv thim, which is thruly loyal. The natives seldom fight, but whin they get mad at wan another they r-run-a-muck. Wbin a man r-runs-a-muck sometimes they hang him an' sometimes they discharge hin an' hire a new motorman. Th' women ar-re beautiful, with languishin' black eyes, an' they smoke seegars, but ar-re hurried an' incomplete in their dhress. We import juke, hemp, cigar-wrappers, sugar an' fairy-tales fr'm th' Ph'lippeens, and export six-inch shells an' th' like. Iv late th' Ph'lippeenes has awakened to th' fact that they're behind th' times, an' has received much American am-minition in their midst. They say th' Span-yards is all tore up about it."—Chicago Journal.

SHE TRUSTED HIM TO NO ONE.

A yonng woman entered a railway-train with a poodle clasped tenderly in her arms. "Yadarn," said the conductor, as he punched her ticket, "I am very sorry, but you can't have your dog in this car. It's against the rules." "I shall hold him in my lap all the way," she replied, "and he will not disturb any one." "That makes no difference," said the conductor. I could not allow my own dog here. Dogs must ride in the baggage-car. I'll fasten him all right for you—" "Don't you touch my dog, sir!" said the young woman, excitedly. "I will trust him to no one!" And with an indignant tread she marched to the baggage-car, tied her dog, and returned. About fifty miles further on, when the conductor came along again, she asked him, rather sharply: "Will you please tell me if my dog is all right?" "I am very sorry," said the conductor, politely, "but you tied him to a trunk, and he was thrown off with it at the last station. As you didn't allow any one to touch him, of course we couldn't untie him, and the baggageman had no time to send for you."—Chicago News.

A SMALL MATTER.

Young lady (out yachting).—"What is the matter, Captain Quarterdeck?" Captain—"The fact is, my dear young lady, we've broken our rudder." Young lady—"I wouldn't worry about that. The rudder is mostly under water, anyhow, you know, and it isn't likely people will notice it."—New York Weekly.

JUVENILE SAGACITY.

The new baby had proved itself the possessor of extraordinary vocal powers, and had exercised them much to Johnnie's annoyance. One day he said to his mother: "Ma, my little brother came from heaven, didn't he?" "Yes, dear." Johnnie was silent for some time, and then went on: "Say, ma." "What is it, Johnnie?" "I don't blame the angels for bouncing him, do you?"—Judge.

WAITING FOR A BAGFUL.

A new post-office was established in a small village away out West, and a native of the soil was appointed postmaster. After awhile complaints were made that no mail was sent out from the new office, and an inspector was sent to inquire into the matter. He called upon the postmaster, and stating the cause of his visit, asked why no mail had been sent out. The postmaster pointed to a big and uearly empty mail-bag hanging up in the corner, and said: "Well, I ain't sent it out 'cause the bag ain't nowberes nigh full yet."—Harper's Bazar.

TOO HIGH A PITCH.

At a recent birthday party in Shepherd's Bush a young lady began a song, "The autumn days have come, ten thousand leaves are fall-ing." She began too high. "Ten tho-ousand—" she screamed, and then stopped. "Start her at five thousand!" cried an auc-tioneer who was present.—Tit-bits.

WHERE ANANIAS CAME IN.

A long-suffering listener, after bearing from a youth his account of how he and two com-panions kept five hundred Indians at bay for twenty-four hours, asked, "Do you know why the Lord said to Ananias, 'Stand forth?'" Upon receiving a negative reply, he continued, "Well, I don't either, unless it was so that you and your two companions could stand first, second and third!"—Argonaut.

STRONG-MINDED.

"Your wife is somewhat strong-minded, isn't she, Littlejohn?" "Strong-minded! Well, a furniture-polish peddler came here yesterday, and in five min-utes' talk she sold bim some polish she had made herself."—Congregationalist.

EXPLAINED AT LAST.

A quiet wedding is one where the bride and bridegroom do not talk back, and where little is said by the families interested after the bride has been given away.—New Orleans Picayune.

A MYSTERY.

An engaged young man hears all about the faults of his sweetheart's relatives, but she will deny after marriage that they have any faults.—Atchison (Kansas) Globe.

JUST ALIKE.

The peacock emits some frightful vocal utterances just before a rain. So does the man who is afflicted with rheumatism.—Denver Post.

NOT VERY PREVALENT.

A writer declares that bashfulness is a dis-ease. This may be true—but there are lots of immunes.—Dayton (Ohio) Herald.

BRIGHT BITS.

A pretty little girl of three years was in a drug-store with her mama. Being attracted by something in the show-case, she asked what it was. The clerk replied, "That is a scent-bag." "How cheap!" replied the little girl. "I'll take two!"—Youth's Companion.

Four-year-old Barbara went to church with her two sisters and came home crying. "What is the matter, dear?" inquired her mother. "He preached a whole s-sermon—about—M-Mary and Martha," sobbed Barbara, "and—never said—a w-word about me."

"Darling," said a Chicago lover, "don't you think that it is unlnecky to postpone a wed-ding?"

"I can't help that," was the reply of the adored one; "my dressmaker is sick, and I'm afraid it would be more unlucky if I were to go ahead and get married before having all the clothes I want made while my father is willing to pay for them." Whereupon he concluded to defy the fates and wait for the dressmaker to get well.—Chicago Post.

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## Our Miscellany.

## VALE'S PREX COULDN'T UNHARNESS A HORSE.

HENRY S. ALLYN, the venerable monument dealer of Whitesboro, is a man of Connecticut birth. He tells the following story, which happened when he was a boy—seventy years ago or more—way down East: "There was a man in our town who was called the Rev. Dr. Upson. He was one of the progenitors of the present chancellor of the university in this state, Prof. Upson. Dr. Upson was a Congregationalist preacher, and was very friendly with Dr. Dwight, president of Yale College. One afternoon he visited New Haven and was urged by the president to remain over through the next day, when Dr. Dwight promised to take him out riding. So he stayed. The next morning, behold, the president of Yale College sallied forth in search of a horse; for there were no livery-stables in that far-off day. He found, however, that his next-door neighbor was busy in mowing the grass, and was willing to accommodate him with the loan of his horse; but he stipulated as follows: 'When you bring him back you must unharness him and put him into the stall.' 'Very well, I will,' said President Dwight. So, after a pleasant day's excursion, the two dominies returned. Then the president, remembering his promise, told Dr. Upson that he had contracted to unharness the horse, and prayed for his assistance. 'Then these two distinguished clergymen proceeded to execute their task by unbuckling every buckle they could find and throwing the dismembered harness into a heap on one side. Finally the patient animal was freed from all his trappings—except his collar. At this Dr. Dwight tugged vigorously for some time, and then called Dr. Upson to his assistance. They both pulled at it vigorously, but ineffectually. At last Dr. Upson said, 'That collar must have been placed on that beast when he was a colt; and his head has since grown so as to make its removal impossible.' 'Yes,' said Dr. Dwight, 'I guess you are right.' But at this point the milkmaid approached the two erudite divines, and, seeing their dilemma, said: 'If you turn the collar around it will come off.' They did so and were overjoyed to find with what ease they could then remove it. 'My dear brother,' said Dr. Dwight, in edifying conclusion, 'either of us knows ten times as much as that milkmaid, and yet neither of us knew enough to turn the collar!'"—Utica Observer.

## THE METRIC SYSTEM.

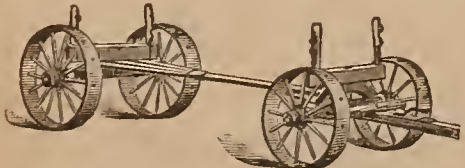
Professor Benjamin Smith Lyman, the well-known geologist and civil engineer of Philadelphia, has issued an able pamphlet against the proposed legislation by Congress legalizing the French metric system. Among other good things, he says:

"If our early predecessors, in learning to reckon, had but omitted to count their thumbs, and had taken eight instead of ten as the base of notation, they would have saved the world a vast deal of labor, and would have almost abolished the use of vulgar fractions. The most natural, easiest, and therefore commonest mode of subdivision is by halving again; the next easiest is by dividing into thirds; then, much less easy, into fifths, or tenths. If eight instead of ten were the base of our arithmetical notation, so that every place to the left gave a value eight times greater, and in fractions every place toward the right, from the comma, a value eight times less, the fractions of halves, quarters and eighths would be expressed simply by a single figure; sixteenths, thirty-seconds and sixty-fourths by two figures, and so on. Comparatively seldom would it be necessary or desirable to express other fractions than these most natural ones, that are constantly required even with our uncongenial decimal fractions.

"The present measures, with the foot, bushel, hogshead, gallon, pint, pound and others, would harmonize admirably with the eight-fold notation and numeration, and comparatively trifling changes only, without the slightest confusion or effort, would be needed for perfection, if exact correspondence of the parts should be considered desirable. The foot itself would be ideally beautiful, natural, universal, non-political, rational unit, derived by twenty-seven times progressively halving the equatorial circumference of the earth."—Meehans' Monthly.

## FARM WAGON FOR ONLY \$19.95.

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, sold at the low price of \$19.95. The wagon is only 25 inches high, fitted with 24 and 30 inch wheels with 4 inch tire.



This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels, and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices, made any size and width of tire to fit any axle.

## WORKING THE BIG GUNS.

In manning the batteries on a vessel of war twelve men are allotted to every gun, with the exception of the ten, twelve and thirteen inch guns mounted in turrets. In the latter case, the guns being mounted in pairs, twelve men are divided between them. Each man has a certain duty to perform, and under the thorough system of drilling in the United States navy he is generally letter-perfect in his work. The six men of the thirteen-inch crew are designated as follows: Captain, first plugman and sponger, liftman, return-lever man, trainer.

The duty of the captain is to exercise a general supervision over the crew and to handle the hydraulic rammer. The first plugman and sponger has his station at the rear end of the plug platform, and the second plugman and sponger at the front end of the plug platform. By the plug is meant the piece of steel used to close the breech. The liftman attends to the lift-lever, the return-lever man to the return-lever, and the trainer turns his attention to the lever controlling the hydraulic training gear. In drill and in action everything runs like clockwork, each man seeming a component part of an intricate piece of mechanism.

The great guns are aimed by means of "range finders"—instruments invented by naval officers for the purpose of divining the range of an enemy. One used to a considerable extent in the service consists of two telescopes, placed one at each end of a base-line (some measured length of the vessel). These telescopes are directed upon the target, the distance of which determines the angle between their axes, thereby varying the resistance of two conducting bodies and causing the deflection of a galvanometer, which is graduated in yards, so that the distance may be read off directly. The working of this finder is so simple that enlisted members of the crew are sometimes stationed at it.

From the foregoing the reader can easily understand that placing and fighting the battery of a modern man-of-war is a science in itself. It is a mistake to imagine that all is smooth sailing and perpetual holidays in Uncle Sam's navy. In fact, the naval officer of the present day must embody in himself the learning of a college professor, the scientific skill of an expert, the courtesy of a Brummel, and the dash and bravery of a D'Artagnan.—From "A Warship's Battery," in Frank Leslie's Popular Monthly.

## JOE JEFFERSON'S BIRCH-BARK CHECK FOR \$2.

There is a bank in a little country town up in the mountains of New Hampshire, as the story is told, which holds a check of Joseph Jefferson for \$2. The check is in a frame, under glass, and will probably never be seen by Mr. Jefferson. It was written while the veteran actor was out on a hunting and fishing trip. While following the road on foot to a town he came in sight of a farm-house. Here, he thought, was an opportunity to hire a wagon and team to carry him the remainder of the way. But to his surprise he found that he did not have the \$2. Not a piece of paper could be found. So the old comedian took out his knife, cut a square piece of white birch-bark from one of the trees near by, and wrote a check for the amount on that. When the little country village was reached this unique check was taken to the bank by the farmer and immediately cashed. The bank had it framed and keeps it as a souvenir of the great actor.—Portland Argus.

## A BUSINESS EDUCATION AT HOME.

Every ambitious young man or woman who wishes to succeed in business, and secure a good position, needs a practical knowledge of bookkeeping, business forms, commercial arithmetic, penmanship, shorthand, etc. You may now learn these subjects thoroughly by mail at your own home, during your spare hours, without interfering with your regular work. Students and references from every state. For full particulars write to the well-known Bryant & Stratton College, 331 College Building, Buffalo, N. Y.

## A CHEERY ATMOSPHERE.

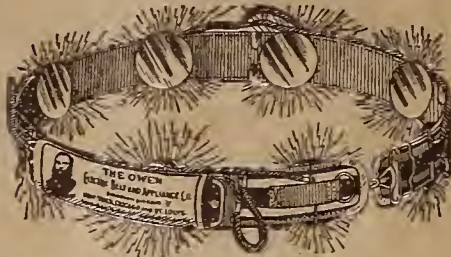
There are moral gains in advertising, though merchants rarely count them. As an exchange says of a store that lacks life: "Trade languishes, and the merchant grows irritable. He is dissatisfied with himself and with all his surroundings. His clerks become infected, and customers note the change." Moral: Keep a cheery, freshened atmosphere at all seasons; and remember that a cheery atmosphere is never so necessary within the store as when the air outside is bleak.—Philadelphia Record.

## STREET-CARS OF MANILA.

All the street-cars in the city of Manila were made in America. The open cars are thirteen feet six inches long over dashes, and have a seating capacity of twenty passengers. These cars are drawn by Philippine horses, which are about the size of a Newfoundland dog, and it was therefore necessary to make them extremely light and at the same time of the required strength. The street railway company is known as the Transvias de Filipinas.—Street Railway Journal.

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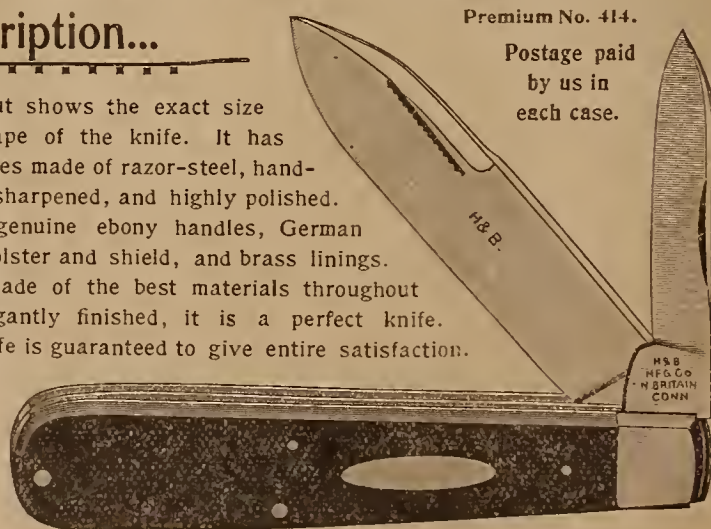
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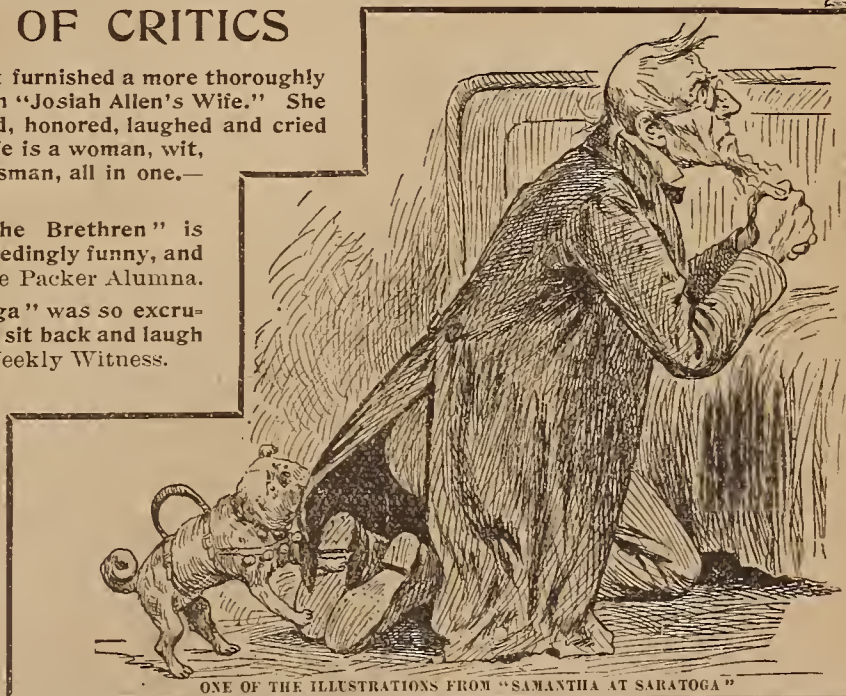
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## PEPPERMINT CULTIVATION.

THE cultivation of peppermint is a comparatively simple process, and so is the distillation of its oil. The crop has in many instances proved more than profitable—it having often made the distiller wealthy. There is at present not the same chance to become rich from the cultivation of the plant and the distillation of its oil because, owing to an increased production, there has been a fall in price. Still the price is sufficiently high to insure a margin of profit to the grower.

Peppermint can be grown upon almost every kind of land that will yield a profitable crop of potatoes or of corn. It does best, however, in low situations, where the supply of water is constant, but not excessive. Swamp-lands, if well supplied with muck, are, when reclaimed, admirable for the cultivation of this crop. In fact, the most profitable fields in Michigan were at one time marshes.

In the preparation of the soil the land should be plowed late in the autumn, so that the winter frosts and rains shall have full action upon it. As soon as the land can be worked in the spring furrows should be turned about thirty inches apart, the cuttings of the rootstocks dropped in them, and covered. The land must be kept clean, not only on account of the advantages to be gained by clean culture, but because of the inferiority of the oil produced from weedy peppermint, especially when the weeds known as horseweed, fireweed and Eaton's grass are present in the hay at the time of distillation. After the plants have become established—that is a few weeks after setting—all horse-cultivation must cease, since the underground parts of the plant are only a short distance below the surface, and deep cultivation would injure them. Manual labor being a necessity, the cost of cultivation is the most expensive item in handling the crop.

The first crop may be harvested in August, or, more properly, when the plants are in flower. At that time the oil they contain is in best condition and in largest quantity. Since a mowing-machine is too hard to work upon such soft land as peppermint delights in, the plants are the first year generally cut with a scythe. In the following two years a mower or an old-style reaper may often be of use, the ground having been cultivated less and consequently become somewhat harder.

After cutting, the plants are allowed to wilt before being taken to the distillery. When sufficiently wilted they are thrown into wooden tanks or vats, usually about six feet tall and five feet in diameter. When these are full the tight-fitting covers are set and live steam is turned on at the bottom. As the steam passes up through the mass of stems and leaves it volatilizes the oil and carries it up through the top of the steamer and down to the condenser. The condenser consists of a series of pipes immersed in a tank of cold water, or over which a stream of cold water pours. The colder this water is the better, since condensation is more rapid. Both the steam and the oil are reduced to their liquid forms and allowed to collect in closely covered cans, from which the water and the oil may be drawn off separately.

The three crops of peppermint that can be harvested from a single planting will usually have cost, when converted into the form of oil, about one third more than the harvesting and the growing of an equal number of corn crops. The market value of the oil varies according to quality, ranging last season from seventy-five cents to one dollar a pound. An acre will produce annually from ten to fifty pounds of oil, depending upon the season and the grower. The cost of the distillery is, of course, dependent upon its size. A small but serviceable one may be made for as little as \$150.

Of the three varieties of peppermint in cultivation in this country the white mint, a recent introduction from England, is considered the best. It is, however, not so hardy nor so productive as the other two varieties. American mint, so called, was introduced from Europe about sixty years ago, has become naturalized in many parts of the East, and is the variety most commonly cultivated in the states of New York and Michigan. Black mint, which has been brought from the peppermint-fields of England within the last decade, is more hardy and more productive than either of the other two varieties. M. G. KAINS.

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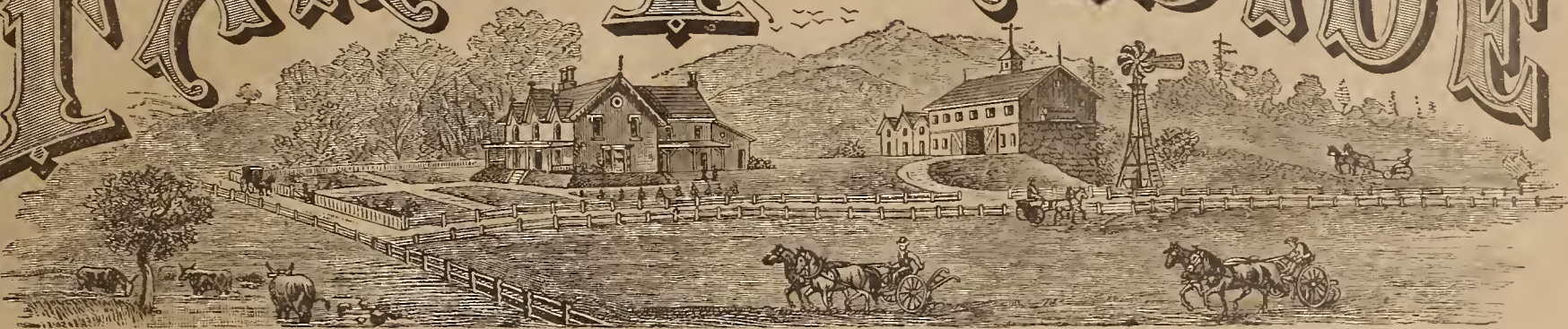
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# FARM & FIRESIDE.



EASTERN EDITION.

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OCTOBER 15, 1898.

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24 NUMBERS.



GOV. ROBERT B. SMITH, of Montana.

Governor Smith believes the future holds ample riches for the agricultural class of his state. He writes "Farm and Fireside" as follows:

"Let me leave to say that the outlook for the farmers in Montana is exceedingly bright.

"Montana is undoubtedly misunderstood in the East. If all our land susceptible of cultivation was improved and farmed our farming land in area would exceed the state of Iowa. Our soil is as rich as the valley of the Nile, and is free from all noxious weeds that destroy and injure the crops in the eastern states. Much of our land will produce fair crops without irrigation, but irrigation is better than to do without it.

"We raise from 25 to 60 bushels of wheat per acre, 35 to 75 bushels of oats per acre, and 30 to 65 bushels of barley per acre; other crops in proportion. All kinds of grasses and clover grow luxuriantly in our state.

"Stock-raising is very profitable on account of the abundant and open free pasture, where stock can live from ten to eleven months without the cost of one cent for feed.

"Mining interests furnish a splendid market, and we are so far from eastern states, competition in farm products does not materially interfere with our farmers. On the whole, farmers have bright prospects ahead of them."

When the agricultural population prospers the country prospers. This condition not only prevails at present, but is destined to continue. Millions in mortgages have been paid off, and the farmer is now able to expend more or less in the purchase of implements and household articles, including both the necessities and luxuries of life. There must be new furniture, new clothing, new curtains, new books, new sewing-machines, new stoves, new watches and other jewelry, and a thousand and one other articles.

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would again produce wheat abundantly if the price were high enough. The corn belt in the Mississippi valley was devoted by the original settlers to the raising of wheat to a considerable extent, and continuous growing of that crop for ten or twelve years without rotation exhausted the available plant-food. Farmers then turned their attention to stock-raising, growing crops to feed their animals, rotating grains and grass. These grass-lands will yield wheat as abundantly as ever; but it is grown now so abundantly that farmers do not get good prices for it. . . .

"Within the past few years, through the agency of agricultural experiment stations, we have been able to ascertain the value of wheat as food-stuff for animals. We know that sixty pounds of average wheat will make thirteen pounds of live hog, and it is extensively fed when the price drops down low. Wheat is the most nutritious of all grains. . . . Nothing comes nearer to being a complete ration for a human being than the army hardtack furnished to our soldiers, unless it be milk, and you can't always get that.

"When you civilize a man he wants wheat and beefsteak. The nitrogenous element in food is sought by all classes and nationalities of people. To baked potatoes man adds buttermilk. The New-Englander is partial to pork and beans; the one balances the other. Oatmeal and skim-milk make a proper combination. The Chinaman, who is reported to live on rice, grows beans to eat with it; the Japanese add fish.

"But that is getting away from the point at issue, which is that the world's wheatlands—or at least, so far as we are concerned, those of the United States—are all under cultivation? Sir William is unduly excited, and his emotion is caused by a lack of appreciation, if not knowledge, of the resources of our country. He advocates increased electrical agitation of the atmosphere as the only method of precipitating the nitrates in the air and thus replenishing the productive powers of the earth. It is much better, it seems to me, to plant clover and other legumes, which produce the nitrates much faster than electrical disturbances. It puts them where they are wanted, too, while an electrical agitation might visit itself in violence and destruction upon your neighbor's property, where it could by no possibility do any good in any event."

Speaking of the Genesee valley as illustrating his point, Secretary Wilson said:

"The first great wheat-growing of the country was done there, but the people now feed live stock on the grass growing in the old wheat-fields, and buy their flour at Minneapolis, getting it for less money than it would cost them to make it. And yet these same grass-lands could now produce as much wheat as ever, and would if it paid. Congressman Wadsworth, chairman of the Committee on Agriculture in the House, who is fattening seven hundred steers on his place, and his neighbors as well, find it more profitable to farm that way than to follow the practices of the early day, producing nothing but grain."

THE great waste and damage to a country's industries involved in a great strike," says "Bradstreet's," "is well shown by some lately published statistics of the losses caused by the strike of the Welsh coal-miners, which ended recently. This cost is placed at \$30,000,000, or \$1,500,000 weekly during the period the strike lasted. If the damage were confined to the mining industry itself this would be bad enough, but the interdependence of modern trade and commercial life made it necessary that a wide circle of industrial workers and enterprises should drink from the same cup. For instance, it is estimated that the loss in coal freights alone was fully \$7,000,000, while the losses of the railroads are placed at fully \$2,000,000. That the wages of sailors, the amounts paid for dock dues and other fairly measurable items were heavily reduced goes almost without saying. The indirect loss, some of which may never be regained, caused by the diversion of the coal trade to other countries is, of course, incalculable, but the decided boom given the American export trade in coal to British colonial ports is of too close a date to be forgotten."

These estimates are of material losses; the human suffering involved in strikes, or in the conditions that produce them, cannot be measured.

With the settlement by arbitration of serious differences between operators and miners in the bituminous coal regions of this country several months ago the public expected an end of mining troubles, for a time at least. But troubles did not stop. In a district in Illinois there now is a strike accompanied with violence. In some districts of Ohio, though they are quiet—too quiet—there is intense suffering. The mines are closed down; the miners are without work, and their families are in actual need of the bare necessities of life. For months past the operators in this district have been unable to meet the competition of operators in an adjoining state. West Virginia soft coal, mined by underpaid labor, has taken possession of their market, closed down their mines and thrown their miners out of work. The difference of a few cents a ton, which would hardly be felt by consumers, would change these conditions and give work to the idle miners and bread and clothing to their families. The desire to buy things cheap, or to get them made cheaply, regardless of the toiler's suffering, is without conscience or humanity.

THE "Review of Reviews" for October says: "There is no very large point of principle or policy left open by the protocol except as respects the disposal of the Philippines. As we have observed from month to month, there is no easy way visible by which we can withdraw from those distant islands. The inhabitants will not be willing to have the Spaniards retain possession of any part of the group; and the Spaniards, on their part, are not able to make any successful assertion of sovereignty in the face of continuous insurgent opposition. The Philippine inhabitants would, on the other hand, evidently be readily reconciled to the continued presence and oversight of the United States. An insurgent convention took that ground. Gen. Wesley Merritt departed several weeks ago from Manila, in order to meet the peace commissioners at Paris and give them the benefit of his observations. General Otis, meanwhile, has been in command of our troops at Manila, and seems to have shown excellent judgment in dealing with every question that has arisen. The earlier newspaper reports of serious friction between the insurgent chiefs and the American forces in the Philippines have probably given a wrong impression. The fact seems to be that the chief anxiety of the insurgents is to make sure that there shall be no compromise with the Spaniards under the terms of the Paris treaty, but that Spain shall withdraw as completely from the Philippines as from the West Indies. Certainly there is no simple solution except Spanish withdrawal."

ANALYSES of sugar-beets grown this year on the experimental plots in a number of Ohio counties showed that they were mature and ready for manufacturing by the middle of September. This is a month earlier than beets matured last year, and is an agreeable surprise to those interested in the beet-sugar industry, as last season was considered a favorable one for early maturity. The tests also showed very satisfactory results as to the quality of the beets, the percentages of purity and sugar both being high.

CANADA has voted in favor of prohibiting the manufacture, importation and sale of all alcoholic liquors as a beverage. While it is true the vote was not a mandate to the law-makers, but simply an expression of opinion, the majority small, and only a minority of the registered voters went to the polls, the issue is now at the front in Canadian politics. The Liberals, now in power, having promised to submit this question to a general vote, and having carried out the agreement, is under some obligation to introduce a bill for prohibition in Parliament. But it is not certain that such an act will be passed. Many members of the Parliament and the party in power have been placed in hot water by the result of the election, and there will be some fine balancing of chances to determine the best direction in which to jump out.

## WITH THE VANGUARD

SIR WILLIAM CROOKES, in a recent address to the British association, reviewed the world's sources of wheat production, and states that the demand will exceed the supply within a generation. At the present average yield of 12.7 bushels to the acre, if population increases at its present rate and all the lands capable of producing wheat are under cultivation, the limit will be reached in 1931. He does not predict starvation for humanity, but says that science will come to the rescue. The yield of wheat can be doubled by increasing soil fertility. The problem science will solve is the withdrawal of nitrogen from the atmosphere for use in enriching the land.

In an interview for the press, James E. Wilson, secretary of agriculture, says, in part: "Professor Crookes takes the position that the possible wheatlands throughout the whole world have been brought under cultivation—that there are no more in the United States. It is true that the territory of the United States has been settled clear to the Pacific coast; but it is also true that lands originally sown in wheat and devoted to some other crops

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## ABOUT RURAL AFFAIRS.

**Vivisection and Other Things.** One of my readers, Mr. Jefferson D. Cheely, of Marion county, Ill., writes to me as follows: "Usually I enjoy reading what you have to say in FARM AND FIRESIDE, but there are some things I do not approve in your writing; for what two men ever did see things exactly alike? First, you do not approve of vivisection. I admit that it is right that we should be humane, and that it seems barbarous to cut a living creature up into small bits. I claim, however, that vivisection has been the means of making many important discoveries, and feel that it would be far more barbarous to let those discoveries remain buried, and thus to allow thousands upon thousands to suffer just for the sake of being humane to a few subjects of experiment. For example: Vivisection has revealed the cause of dropsy; hence, there can be now an intelligent treatment of the disease, and many have been given a new lease of life that would have had to die right off in the absence of such treatment. A few living organisms of the lower order sacrificed for the discovery of these things are as naught compared to the number of human beings benefited.

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"Second, you are down on firearms. I admit that firearms are out of place in the hands of boys. But if you lived in my vicinity your hares and poultry would be devoured faster than you could rear them if you refused to use a gun pretty vigorously. Third, you are evidently not stuck on ginseng culture, and seem to have been relying on those fellows who don't know ginseng from cabbage for your information. I wish to assure you that ginseng culture requires very much less labor than does the production of poultry or garden-stuff, and is more profitable than either."

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**Common Sense in All Things.** I do not ride hobbies, but try to look at things in a common-sense way. For that reason I do not oppose vivisection, per se. Undoubtedly vivisection has been (and to some extent may be yet) necessary in the interest of scientific research. In the hands of the true scientist who knows what he is after it has been and will be a most valuable aid. At the same time it is not needed by

the average medical practitioner, and is a most mischievous instrument in the hands of the medical or other student. In the schools the practice of vivisection can have only two main purposes; namely, to give to the student object-lessons from which to learn already well-known pathological facts (anatomical facts he can just as well learn on dead subjects), and to harden him to the sight of suffering. Not one out of a thousand of these boys is or can be expected to make an important pathological discovery from his experiments in cutting up living organisms. The one in tens of thousands who has the stuff in him for making true scientific researches might well be allowed to experiment on living beings, with proper restrictions. The true scientist, too, is almost always a humane person, and will not inflict needless torture. Most of these experiments can be made on subjects put under the influence of anesthetics. All the other students—the thousands who go to make our ordinary practitioners, and who now are allowed to acquire "nerve" by seeing animals suffer untold agonies—come forth from this schooling soulless, feelingless wretches, ready to use the knife on the slightest provocation on suffering humanity, and to brag over their entire absence of compassion and sympathetic feeling for their patients. For myself and family, in any case involving the use of instruments, I prefer to employ a physician who has not made a practice of cutting up living animals and to take pleasure in watching their awful agonies. On the other hand, when it becomes necessary to operate on animals, as for the purposes of castration or in surgical cases, you will not find me timid or backward. There is, for instance, no more earnest advocate of caponizing our useless surplus cockerels than myself. This is a form of vivisection which I practice and recommend, but it has an object and purpose that is entirely worthy and legitimate.

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**Use For the Gun.** I am afraid of a gun in boys' hands. Indeed, I

always try to get out of gun-shot distance as fast as my legs will carry me whenever I meet a youngster with gun in hand. Unfortunately, that happens far too often. And it also happens very frequently that persons get hurt by a stray bullet or shot fired from a gun by careless young America. Yet I keep several guns on the premises, and I encourage their free use for killing rats and even mice, and of an occasional mink, weasel or other unwelcome intruder. I never have a word to say against the proper use of a gun, only against its misuse. Wherever there is plenty of game, wherever there are enemies which one can best fight with powder and lead, there is the place for the gun. But a gun is out of its proper place when carried in the hands of a small boy along the village streets or the highway anywhere. For a revolver I can hardly imagine a proper place anywhere in our more thickly populated communities, except, perhaps, in some handy yet safe place in the bedroom of a lone farm-house, where it might serve as a protection against the intrusion of burglars or tramps. In the absence of the male members of the household an empty revolver (or a loaded one where the women-folks have learned its use) may prove a valuable protector. What business, however, has the small boy to carry a revolver around with him in his hands or hip-pocket? I do believe that thus far my criticizing friend is nearly in accord with my views.

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**Ginseng-growing.** Possibly we are not so very far apart on the third question, that of growing ginseng for profit. The plant is somewhat particular in its requirements. It thrives in the loam and woods' earth of our forests, in dry locations and in the shade. We cannot expect to make a success of growing it in open ground unless we provide shade for it. In other words, ginseng is a crop only for those more skilled than the average soil-tiller. There are as yet no authentic reports from people who have made a financial success in growing ginseng for the commercial root. A number of people tell of the profitability of ginseng-growing, but they mostly speak of profits by selling the seed and roots for planting. For that reason I have stated that ginseng culture is as yet in its experimental stage. We have yet to find out whether it is profitable in a general way or not, and how profitable it can be made. My friend from Illinois now

assures us, as "one who speaks from experience," that ginseng-growing is less laborious and more profitable than the raising of poultry or the growing of garden-stuff.

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**Willow-growing and a Willow Enemy.** On one of the places under my control there is a willow

hedge dividing the marshland from the orchards. This makes a good and almost impenetrable hedge. A basket-maker in the vicinity has paid me \$5 a year for the whips, which he gathers himself. At this rate an acre would yield quite a sum of money, and all this without labor or expense. Fortunately, no enemy of the crop has yet shown up. A bulletin (No. 143) just issued by the New York Experiment Station at Geneva, N. Y., tells of the appearance of a formidable foe to the willow industry in central New York, especially in Oneida, Madison, Onondaga and Cayuga counties. It has already destroyed the profits and threatens the very existence of the industry. The enemy is the cotton-wood-leaf beetle (*Lina scripta*). It is closely related to the common Colorado potato-beetle, about half as large, a dull gold and black above, and dark metallic green beneath.

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To combat this enemy a machine has been one of the most common means. This consists essentially of a long, flat, shallow trough, lined with metal and mounted on low runners. The tank is partly filled with kerosene or kerosene and water and drawn by hand or horse power between the rows of willows. Projecting arms draw the slender whips over the tank, and the beetles and larvae drop in and are destroyed by the kerosene. Strips over the top of the tank prevent the willows from touching the liquid. These machines are quite effective, but require use every day, sometimes twice a day, for three weeks or more. . . . From experiments conducted by the station it has been found that spraying can be substituted for the machines or used to supplement them with advantage. Three treatments about ten days apart, with green arsenite and whale-oil soap solution, one pound of arsenite and five pounds of soap to one hundred gallons of water, proved a very efficient and inexpensive method of meeting the enemy. The willows become too large to spray with advantage before the third treatment, however, so it seems best to spray twice and follow with the machine. T. GREINER.

## SALIENT FARM NOTES.

**Drainage Without Soil-washing.** S. B. B., Iowa, writes: "On the top of a somewhat elevated

tract of land on my farm is a swale, or depression, about three acres in extent, into which runs all the surplus water that falls on about eight acres. The lowest part of this swale is not more than eighteen inches below the outside rim or ridge surrounding it on three sides. On the fourth side is a sort of depression about fifty yards wide leading to a ravine through which the water from the swale flows. I opened a ditch from the swale into this ravine, and the water runs out readily enough. But it does more. Every winter and spring it cuts ugly gullies down the ravine deep enough to bury a wagon, and carries the soil thus cut out into a creek on a neighbor's farm. I have lost so much good soil in this way that I am thinking seriously of damming up the swale and keeping the water there until it evaporates. Can you advise me in the matter through FARM AND FIRESIDE?"

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Some years ago a neighbor of mine had just such a problem to deal with, and he and I talked it over many times, finally hitting upon a plan which he adopted, and which proved a grand success. Beginning at the lower end of the ravine he put in a six-inch tile-drain up to the lower part of the depression, sinking it low enough to have the upper end three feet deep. Here he dug a well three feet in diameter and four feet deep, bricked it up even with the surrounding surface, and then filled it heaping full with coarse cinders. From this point he ran furrows in all directions. Then with a large plow and strong team he filled up the gullies in the ravine, harrowed it well crosswise, and sowed a strip twenty feet wide in the lowest part with timothy and redtop. Four years later he decided the strip of grass was in his way and he plowed it up, and for nine years he has grown corn, wheat, oats and clover on the land and has had no trouble what-

ever from gullying. During a heavy storm water collects in the swale to some extent, but in a very short time it flows out through the tile. The cinders in the inlet at the upper end prevent all the trash from getting into the tile, and also keep the soil out. This season he is laying drains of three-inch tile from the inlet across the swale in different directions. He has removed the cinders from the well, and will connect the end of the laterals with the main drain and then return the cinders. S. B. B. will find this a very satisfactory plan to adopt.

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**Let Brains Help the Muscles.** A few days ago I went to see a neighbor about a business matter, and

found him preparing a twenty-acre field for wheat. He was harrowing with an eighteen-foot iron harrow drawn by four strong horses. He was then going over it the third time, and still the soil was rather cloddy—much too cloddy to be considered a good seed-bed for wheat. He does not like to have his methods criticized, so I said nothing about his work, but it was plain as day that one going over with a heavy plank float would have done more good than a dozen harrowings. A heavy plank float could be drawn by those four powerful horses with the greatest ease, and it would have pulverized every clod on the field, crushed them to powder, and then one harrowing would have made a perfect seed-bed. Like many another farmer, he imagines he knows most of it, and advice touches his cross-grain.

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This farmer is above the average in intelligence, and he generally grows good crops, but they cost him too much in labor simply because he does not keep himself informed and up to date. He is in the rut that thousands drop into and follow all their lives. Said a progressive young farmer, "I was taught to follow along a certain rut until I was grown; then when I started in for myself I was urged to stick to it the rest of my life if success was my object. But thanks to live agricultural journals I have learned to use my brains as well as my muscles, and as a result I work to fifty per cent better advantage than I formerly did!"

That's it exactly. Farmers need to get their noses out of the furrow, to get their heads up and their eyes open, and to keep themselves thoroughly informed with regard to the latest and best methods of cultivating the soil, of conserving its fertility, of growing maximum crops at a minimum cost, and a larger measure of success is certain to crown their efforts.

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**Corn For Soiling.** A FARM AND FIRESIDE reader living in Iowa

writes me: "I took your advice last spring and planted an acre to Evergreen sweet corn to feed to my six cows if pasturage should get short, and I want to tell you it was one of the best things I ever did. The drought we had in midsummer dried up the pastures so that over fifty per cent of the milk-cows went dry. As the grass began to get short I began to feed the corn, and have had a full flow of milk all summer. I sell my milk to the creamery, and everybody wondered why my supply kept up while theirs fell off over half. That experience will be worth hundreds of dollars to me. Next year I shall keep eight cows and shall plant five acres to sweet corn for soiling. I planted the acre this year in two lots, half an acre each time, two weeks apart, but next year I shall plant in three lots, as follows: One acre of an early variety, Perry's Hybrid or Crosby's Early, as early as I can get it in. The next two acres will be Evergreen and will be put in when I plant dent corn; the last two acres will also be Evergreen and will be planted when the other is about a foot high. This will give me all the feed I will want, and the cows will get it whether pasture gets short or not. I drill the corn in, dropping two grains in a place about one foot apart. It may be drilled thicker, but at the rate of two grains to the foot I find the plants make best growth, and to make first-class feed the stalks must be tasseled out and eared. From the time it begins to ear until the leaves are dried it is a splendid milk-producer. I drilled one fourth of an acre to common dent corn, but as a food for milk-production it was not worth half so much as the sweet corn, while the cows did not seem to like it half so well. After the acre of early corn, which I shall plant next year, is cut off I shall plow the ground and sow it to millet."

FRED GRUNDY.

## Our Farm.

### FARM THEORY AND PRACTICE.

**COUNTRY FAIRS.**—There is often a vast difference between a country fair and a county fair. The latter is frequently a town affair, used by an association as a money-making scheme, and consisting of nearly every possible device for drawing a crowd and extracting money from it. The true country fair is a more or less local affair controlled by live farmers who make it an opportunity for the exhibition of the products of the community and for a huge picnic and good time. It is purely a country affair, and while attracting friends from the towns the farming element is dominant in every department. Each local live-stock breeder brings the best of his herds and flocks, the fair serving as a good advertisement of his stock. Farmers take delight in bringing specimens of their choice varieties of grain and vegetables for comparison with those of neighbors, and the fair has thus an educational value. A small gate fee is charged, and entry fees as well, to form a fund from which small premiums are paid and improvements of grounds are made. No race-track is needed, and costly buildings are not in line with the plan on which the combined fair and picnic is conducted. The fakir finds no place upon the grounds because the fair is not run for money, but for the pleasure and improvement that may be gotten from such an ingathering of neighbors and friends for many miles around. It is a clean, safe place for young and old. The receipts pay all bills, and every one has a day of rest and recreation. Such local country picnics are held every year in some communities, being conducted just as I have described, and their number should increase wherever the county fairs are given over to horse-racing, drinking and gambling. The local fair can have the true, old-fashioned flavor—a meeting of farmers for comparison of products and for a day's enjoyment of the society of their friends, and such a combination of fair and picnic is as helpful as the average "agricultural horse-trot" is debasing.

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**TIMOTHY AND CLOVER.**—It is a common practice to sow some timothy in the fall when seeding to wheat, notwithstanding the fact that the rotation is supposed to be one depending upon clover largely for fertility. The clover is seeded in the spring, and with the sowing of the seed the idea is that one's duty to the field has been done, and when the clover fails, as it so often does fail to do well under such circumstances, the farmer congratulates himself upon the fact that he has the timothy anyway. The fall seeding to timothy exerts two influences distinctly unfavorable to the best interests of the soil: It takes the room and fertility needed by the tender clover-plant, and it turns a plow field into a timothy meadow the year that the soil is needing renewal of its strength through the agency of clover. I have watched this matter with much interest, and nine times out of ten the farmer who knows that his soil needs a clover sod badly, and believes that clover is a necessity, will rest quite well satisfied with a good stand of timothy and continue to rob that soil by converting the field into a meadow for two or three years. Timothy is hard on land—no doubt about that. Fall seeding of wheatland to timothy is not the way to help out a tender lot of clover-plants that may be secured the next spring. Of course, soils differ in character and proper treatment, but ordinarily when a clover sod is wanted, the best way is to sow no timothy-seed in the fall and to sow only lightly of it in the spring, letting the clover have a fair show. A seeding of timothy in the fall often assures a sod when clover would have failed anyway, and if it is not necessary to depend upon clover as a fertilizer, this safe method of seeding is all right because it may save from the necessity of reseeding the land to wheat and grass or clover; but I do protest against the illusion that we are using clover as a fertilizer when the sod is practically all timothy. It is better for the soil to give clover a chance, and that means that if any timothy is used with it the plants should start evenly, to say the least, and the timothy-plants should be comparatively few in number. Give the clover a chance, or else plant to fertilize the soil by some other means.

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**TAXING TIMBER LANDS.**—Our advocates of reforesting extensive areas of this

country suggest no practicable plans for accomplishing the work. The individual owner of land as a rule is necessarily interested in immediate income from his holdings, and he must plan as his own interests dictate. He cannot afford to do much for the prosperity of future generations at the expense of present income. But taxes are always conceived to be burdensome, and the release of all wooded land from taxation would have a marked tendency toward increasing the area of so-called forest land in broken and thin sections of the country. More land would be left in a wild condition, and more unproductive land would be surrendered to new tree growth, if such land were exempt from taxation. There is no doubt that forests do affect climatic conditions and are necessary to the prosperity of an agricultural country. Pioneers in the pine forests of Pennsylvania found difficulty in drying their clothes on wash-day on account of the humidity of the air. A drought of several weeks duration had little effect upon crops in those early days because there was no thirsty air to rob the soil of its stores of moisture. The air remained moist through the evaporation of water in the forests from shaded soil and from leaves of growing trees. Since the timber has been removed the air soon becomes hot and dry and takes up moisture from cultivated fields so rapidly that a short drought does serious damage. Every state has considerable areas that give no net profit from cultivation, and these areas should be growing trees. We can really do little in a practical way to encourage the abandonment of cultivation, but wisdom and prudence suggest that we should offer exemption from taxation to every acre that may be devoted to the growing of forest-trees. Too much broken and thin land is under cultivation, and too little land is covered with trees for the protection of agriculture. The first step toward securing a change for the better is exemption of all wooded land from taxation. Let us have such legislation. DAVID.

### DO NOT KILL THEM. CHAPTER III.

#### THE LACE-WINGED FLY, OR GOLDEN-EYES.

Very closely related to plant-lice are the Psyllas, of which that infesting the pear is one of our worst insect pests. Unfortunately for them, however, there are also other insects which seem to consider them most desirable food.

Besides one or two ladybird-beetles, the larva of a small fly (*Chrysopa oculata*), in many instances, has very greatly reduced the numbers of the Psyllas. The adult insect is a very dainty, small, green fly, but belonging to the order Neuroptera, having four similar wings instead of two, and mouth-parts fitted for biting rather than sucking, as is the case with the true flies, or Diptera. From the symmetrical arrangement of the small veins in its delicate wings it is usually called the "lace-winged fly," and on account of the luster of its "golden eyes" is often so designated. The adult insect refrains from taking any food whatever, and lives solely for the purpose of laying the eggs whereby the species may be perpetuated. These little eggs, however, and the manner in which they are laid are a matter of considerable interest to the careful observer. Previous to laying the female deposits a drop of viscid liquid on the leaf, and then by quickly raising her abdomen draws this out into

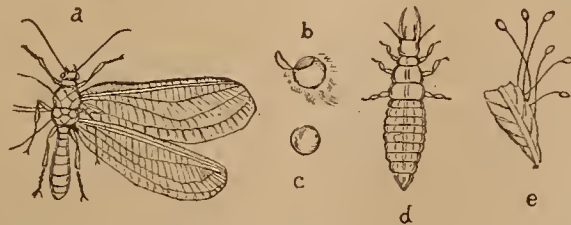


FIG. 1.

Lace-winged Fly (*Chrysopa plorabunda*)—a, adult fly; b, cocoon containing pupa; c, cocoon after fly has emerged, showing lid; d, larva; e, eggs. (After Riley.)

a fine, silken thread, which dries instantly and forms a stem on which the egg is laid. When the young larva hatches it crawls down this stem and at once runs off in search of food. This food consists not only of Psyllas, but of a great variety of insects and insect eggs, and they even seem to be as well satisfied with another *Chrysopa* larva of the same brood. Thus, were it not for the manner in which the eggs are placed, the first larva to hatch would eat up all the other eggs, or the strongest would devour all the weaker members of the

brood, and for this reason the present species goes so far as to lay the eggs but singly instead of in groups.

During a serious outbreak of the pear-psylla in Maryland orchards in the summer of 1894 Mr. C. L. Marlatt records that on some trees nearly every leaf would have one or two *Chrysopa* eggs on it.

The young larva is a very active and really ferocious-looking animal when viewed under a magnifier. It is covered with long spiny hairs, and its large head bears two long sickle-shaped jaws. In this stage its mouth-parts are very interesting, in that the second pair of jaws—which are generally more or less like the first, or upper, pair, known as the mandibles—have become very elongate and fit into the under side of the mandibles as in a sheath, and thus form a complete tube between the two jaws. When a Psylla or other insect is caught it is firmly grasped by this formidable pair of pincers and its body juices are sucked out through the pair of tubes above described. Thus we have here an instance of what is generally termed a "biting" insect sucking its food, but not, however, by means of a single beak, as do the plant-lice and true bugs.

After about ten days of very hearty feeding the larva becomes full-grown and proceeds to spin a small, nearly spherical, silken cocoon, generally in the curl of a leaf, which glistens in the bright sunshine like a veritable pearl. Like the egg, this cocoon is very small in comparison to the larva, and as the larva hatches from the egg, so the adult emerges from the cocoon by cutting out a circular lid from the apex.

The adult flies often come into the light through an open window during the summer, and their presence in an orchard or on any crop infested with plant-lice may be readily detected by their characteristic eggs.

E. DWIGHT SANDERSON.

### PROTECTING TREES AGAINST RABBITS AND MICE.

The frequent injuries done by rabbits or mice in girdling fruit and other trees has led to perhaps more experiment than the injuries done by any fungous disease or insect pest. Long before the practice of spraying came into vogue we find orchardists discussing this or that method of combating these foes, or of repairing the injuries done by them—mounds of earth or of tramped snow around the trees; planting cabbage to serve as food for rabbits; wrapping the trunks with wired lath, paper, tarred paper, corn-stalks, cloth; covering the trunks with manure-plasters, fats, axle-grease, blood, whitewash, tar and other substances supposedly obnoxious to mice and rabbits, have all been advocated. As a rule these remedies are only makeshifts, at least where the animals are abundant, and not a few trees have died from the effects of one or the other of these protective measures.

A spring-set fruit-tree entering its first winter is worth at least one dollar, and if it took a dollar to protect that tree the money would be well spent, especially if non-protection meant loss of the specimen and replanting. But it is not necessary to spend so much to get an efficient protector—a far better one than any enumerated above. Wire netting of a mesh not greater than half an inch and eighteen inches wide cut across in strips at intervals of six or eight inches and sprung around the trunks and the lower ends buried an inch or so below the surface of the ground forms an absolute protection against these pests without in any way injuring the trees.

If the netting be pressed and rolled tightly around a hoe-handle or a broom-stick to make the strips curl better they can be applied much easier, and when once in place cannot be shaken off by the wind. Such protectors need not cost more than three cents when in place upon the tree, and when once in place need no further attention, since being loosely applied they adjust themselves to the tree as it grows. M. G. K.

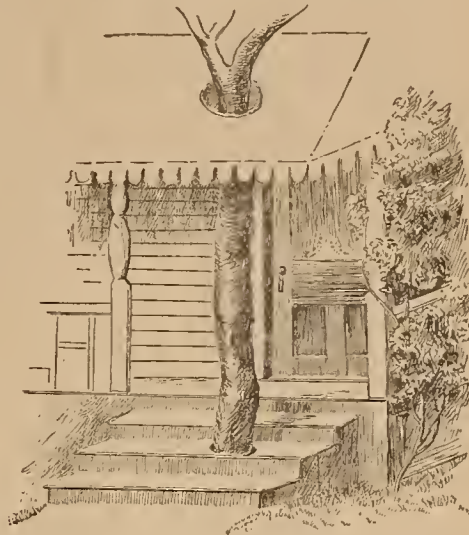
### KAFIR CORN.

In Kansas the acreage of Kafir corn increased from 46,911 acres in 1893 to 535,743 acres in 1898. It is a favorite crop for both forage and grain. The yield of grain is from twenty to fifty bushels to the acre, and its food value is nearly equal to that of corn.

### UTILIZING NATIVE TREES.

There is an unfortunate tendency on the part of many people to cut down or uproot trees that are slightly in the way rather than go to any trouble to preserve them. When this idea is generally carried out in a community, as it often is, the result is long lines of houses and streets sweltering under the unrestricted glare of the sun.

It is refreshing to occasionally note an instance where considerable care is taken to preserve a tree, even though it be but a "scraggy pine." In Asbury Park, N. J., many of the native pines have given place to the cultivated maple, poplar, elm and other trees, but in the earlier days of the



city many home-makers utilized the native pine to the best advantage." The illustration shows one of the early built homes of the place whose owner certainly had a full sense of the value of shade. The house stands on one of the finest avenues of the city, and as will be seen from the illustration the steps were built around the tree at considerable trouble. Later, as the tree grew and the trunk became bare, after the manner of the Jersey pine, additional shade was needed and the awning was added, it also being "built" around the tree. From appearances the house was built fifteen or twenty years ago, and trees and shrubs



adorn the grounds, but still the old pine stands casting its grateful shade on all who pass beneath it, seemingly rejoicing that it has been allowed to live, almost alone, of all its kind in the neighborhood.

On the outskirts of the same city, along a pleasant road, stands a bent and twisted oak, a landmark with a history, and although it is far from beautiful it remains to point a moral to the passer-by. A large board sign bearing on one side the following inscription swings from one of its branches:

### THE OWL OAK.

On the other side this homely combined with history:

About forty years ago a boy named Washington White climbed this oak-tree, which was then a sapling, to catch an owl, which at that time abounded in these woods, and which had stolen a chicken from his father's hen-roost. The tree bent over, and the result is shown in this sturdy, stubborn oak. The illustration, "Just as the twig is bent the tree is inclined," will always be applicable to the formation of good or bad habits in the young. Reader, grow straight.

The boy grew to manhood and passed into the great Beyond, but the tree still stands and in its silent way fulfills its destiny. GEO. R. KNAPP.

## Our Farm.

## NOTES FROM GARDEN AND FIELD.

**STRAWBERRY-GROWING.**—A great many of our fruit varieties are of local value only. They are good, and perhaps superior to most others in certain sections, localities or soils, and worthless elsewhere. As an instance I will mention the Splendid strawberry mentioned once or twice in these columns in earlier issues. Before me is a report on strawberry varieties from Alabama (Bulletin No. 94 of the Alabama Agricultural Experiment Station). This report mentions as "worthless here" Annie Laurie, Belmont, Brunette, Clyde, Crescent, Enormous, Gandy, Giant, Greenville, Haverland, Mary, Parker Earle, Rio, Sharpless, Splendid, Sunnyside, Sunrise, Warfield and Wolverton, and as of doubtful value, Bouncer, Bubach, Hoffman, Jessie and Wilson.

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The same "Splendid" here condemned as worthless is one of my favorite varieties, and I think most valuable in my own locality for a home berry. It makes lots of runners, and if not of the highest quality, nor as good for canning as the Wilson, is at least sure to give us plenty of fruit, and this of good size, fine appearance and good enough flavor. So far as I am concerned I feel that I could do much worse than plant the Splendid for home use, and for near market also.

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The Alabama station also condemns the Haverland as worthless. I have spoken many a good word in its favor. But if I had never grown it before, and was writing only from the experience of the past season, I, too, would condemn it as good for nothing. I had very few perfect berries on my rows of Haverland; most of them were small and gnarly—crippled in some way. Apparently they had not been properly pollinized, but I am at a loss to tell why this should have been thus, as there were rows of perfect bloomers, the Wilson and the Beder Wood among them, almost side by side with the Haverland. The Wilson and the Beder Wood have proved good sorts heretofore to furnish pollen for the Haverland, and when thus pollinized the Haverland has proved to be immensely productive of large berries, the fruiting season lasting from early to late. For home use and near market I have always (this year excepted) found the Haverland a very valuable sort. The station report mentions Wilson and Bubach as of doubtful value at the station. Surely the Wilson is not as productive as the Haverland or the Splendid or many other varieties, while the foliage seems particularly subject to leaf-blight (rust). Yet I have to plant it simply because my own people want it for canning, and the market calls for it. The days of the Wilson are not over yet, apparently. What the Wilson needs in order to remain a popular berry is the selection of plants from a sound ancestry. Too many runners have been taken from diseased beds and scattered all over the country. The tendency to disease has been inbred. Now we should breed for exemption from blight, and try to raise pedigree plants. The Bubach is also one of our best berries in this part of the country.

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**SETTING PLANTS.**—The bulletin already mentioned speaks in favor of my favorite way of setting plants; namely, "with the spade." The operation is described as follows: "When the plants are taken up the old leaves and runners should be pulled off, and the plants should be bunched with the roots all lying one way. It is not necessary to tie the bundles except where they are to be sold by count. Pack them closely side by side; if in a box with the roots down, or if in a barrel with the roots to the center. Always keep plants covered with dampened sacks to prevent drying. When ready to begin planting put an inch or two of water in an ordinary wooden bucket, and put in a layer of plants with their roots in the water. This keeps them fresh, and also causes the soil to adhere more closely to the roots when planted. The planting crew consists of a man with a bright, sharp spade, and a small boy with a bucket of plants. The man sets the spade in front of him, with the corner of the blade at the spot where the plant is to stand, throws his weight on it, driving the sharp spade full length in the mellow soil,

and then pushes it from him so as to open a wedge-shaped hole behind the spade. The boy has a plant ready, holding it by the top, and with a slight swinging motion brings the plant to its place in the corner of the hole, with its roots extending full length and the crown held just at the surface of the ground. The man withdraws the spade, setting it forward ready for the next plant, and as the dirt falls back about the plant he puts his foot on it, pressing the soil closely about the roots. With a little practice plants can be set in this way very rapidly and satisfactorily. There are just two points to keep in mind: First, the plant must be left at the right depth—not so deep as to cover the bud, nor so shallow as to expose the roots; second, the dirt must be packed closely about the roots. This last can be easily tested by taking hold of the plant by one leaf and trying to pull it up; if properly set the leaf will break without loosening the roots.

"Directions are often seen in print for spreading the roots out like a fan, or for making a hole with a mound in the middle, around which the roots can be placed in a natural position; but time spent in such pastimes is simply wasted. New roots as they grow will quickly spread out in all directions. The office of the bundle of old roots is simply to hold the plant firmly in place and to supply it with moisture till the new roots are formed.

"This same method of planting with a spade can be used equally well for cabbage, tobacco, sweet-potato slips or any other small plants, and it will be found more rapid and satisfactory than the more laborious method of planting with a dibber or trowel."

I stumbled on this spade method of planting a number of years ago, and have spoken of it with a great deal of enthusiasm several times. All in all, I find it such a valuable short-cut in garden and field operations every planting season that I must call attention to it again, at the risk of being found guilty of repetition.

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**FALL SALADS.**—Just at present (late in September) there is a good demand in our local markets for endive, and remunerative prices are paid for good heads. This is a crop that I have often (if not regularly) grown, but never marketed and seldom used on the table. I have some excellent heads, and very large ones; but I never care to have endive on my table in any shape, simply because I have much better salad material in a patch of lettuce (the Morse variety), grown in open ground from seed sown about the first of August. Of course, the season has been very favorable for lettuce and similar crops, as we had plenty of rainfall; and in consequence the lettuce is just as brittle and sweet as any I ever had from the greenhouse. Such salad is a "treat" indeed, especially when we have a little fresh cresses to go with it for flavoring.

I also find that these tender little lettuce-heads, even if not very large or very solid, take quite well in market, and just at this time I might sell almost any quantity of it, and I only regret not having planted more of it. Lettuce, in short, is a paying crop almost any time of the year. The only time that it seemed to be a drug on the market during the past year was right in the middle of summer, when the early spring plantings were ready for use.

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**THE SQUASH-BORER.**—In former years I used to lose a good many squash-vines by the depredations of the squash-borer. The main stalk or root just beneath the surface of the ground was often found infested by quite a large number of those fat grubs, and entirely eaten off and cut loose from the root. In order to avoid loss from that source I adopted the plan of "layering" the vines; in other words, covering some of the joints near the main root with moist soil and pressing this firmly over the vine. Roots are soon emitted from the joint, and the plant thus has a chance to thrive and mature fruit even if the main stalk is severed from its root. Some years ago I began using tobacco-dust, or a mixture of bone-meal and tobacco-dust, as a repeller of the squash or cucumber beetle. Since that time I have not noticed any signs whatever of the squash-borer's work, and have lost no more plants on its account. I conclude that the mentioned material is also a sure cure for the squash-borer. Will some of our friends who have made use of tobacco-dust, etc., for like purposes tell us their experience?

T. GREINER.

ORCHARD AND SMALL FRUITS.  
CONDUCTED BY SAMUEL B. GREEN.

## INQUIRIES ANSWERED.

**Japan Quince.**—M. S., Pekin, Ill. The Japan quince bears fruit that is much smaller and harder than that of the common quince, but on cutting it open you will see the resemblance. It makes a very hard, firm jelly, of good quality. I have acquaintances who highly prize it for this purpose.

**Setting Out Blackberry-plants.**—E. I. J., Oklawaha, Ill. I should plant on good retentive soil, preferably sandy loam with a clay subsoil, four feet apart in rows seven feet apart. Plant about the middle of October, using two good sets to each hill. After planting put about the equivalent of a shovelful of loam on each, and then cover each with a little coarse mulch. In the spring take off mulch and level down the earth. Plant about nine tenths Ancient Briton and one tenth Snyder.

**Diseased Rose and Violet Leaves.**—M. F., Tuckerton, N. J. I think the rose will not be seriously injured by losing its leaves so late in the season. The leaves are badly spotted with rust spots, caused by a fungous disease which often appears as the foliage gets old and weak. The violet-leaves appear badly burned, which, I think, comes entirely from disease, but it may have resulted partly from some other cause. I should cut off and burn all the infested leaves, and spray with Bordeaux mixture to prevent its recurrence.

**Yearbook of Agriculture—Injured Peach-leaves.**—A. R. S., Paducah, Ky. You can probably obtain the Yearbook of the Department of Agriculture from your representative in Congress, without charge.—I think the leaves of your peach-trees are injured by a fungous disease, which makes the holes in the leaves. If it is seriously injuring the trees you can probably prevent its spreading further by spraying the foliage with Bordeaux mixture, but I question whether it will pay you to do so. Bordeaux mixture is a preventive, and will not stop the disease after it gets into the plant, but must be applied to keep the disease out.

**Resetting Plum-trees—Setting Raspberries.**—S. S., Collins, Ind. The best time to reset plum-trees is in the spring, as soon as the ground can be worked in good shape. They should be planted about twenty feet apart each way, setting them the same depth at which they have been growing, or a little deeper.—Red raspberries had better be set out in the autumn, since if left until spring the sprouts are apt to get started so much that they get broken off in handling. Black raspberries should be set in the spring, but may be successfully set in autumn if the soil is in good condition and they are covered with a little mulch on the approach of winter. Many fail to make the layers of black raspberries grow, owing to their setting them too deep. They should be set no deeper than they were in the ground where they rooted.

**Planting Almond-trees.**—P. E. P., Estup, Oreg. Almonds should be planted about twenty-four feet apart each way. The method of cultivation for them is much the same as that of the peach. Almonds prefer a loose, warm soil, and heavy soils should be avoided. They will flourish and produce good crops in soils that are too poor for peaches and apricots. The best authorities recommend the mixing of varieties in orchards to secure cross-fertilization. Professor Wickson recommends planting trees in dormant bud, or yearling trees for setting, and rather small or medium-sized yearlings to those that have made a very large growth. The only pruning that is required is to make the trees branch low down, and to secure a shapely form. After the third year pruning should be confined to taking out awkward or interfering branches. Close pruning, as recommended for the peach, is not desirable. Almonds should not be planted in locations subject to fogs or moist winds.

**Bag-worm.**—C. F., Veto, Ohio. The insect you describe is very common in the middle and southern states, and is known as the bag-worm, from the fact that during its entire growth the insect is covered with a bag which it carries around with it and builds as it increases in size. This insect feeds on the foliage of a large number of trees, but is especially injurious to arbor-vitae and red cedar. In the latter part of summer it becomes fastened in place and undergoes its changes. The male insect emerges a perfect moth, and fertilizes the female, who never leaves her case, but after being fertilized lays her eggs in the upper part of her case, dies, and drops to the ground. A little later you will find the smaller bags empty which were occupied by the male, and you will find the larger bags containing a large number of eggs ready to hatch in spring. This insect is also called "drop-worm," from its habit of dropping to the ground with its silk threads when mature. The remedies are picking off and destroying the bags while the eggs are still in them in the winter, and also spraying with Paris green while the worms are feeding.

**Diseased Cherry-trees.**—P. M., Wenatchee, Wash., writes: "My cherry-trees made a rapid growth this season until July, when the leaves dried up and thick gum oozed out through the bark in a great many places. I could discover no bug or worm on

the leaves. The bark loosened from the wood and turned black."

**REPLY:**—If there are no insects present the disease is probably due to climatic conditions, which may be partly overcome by training the head of the tree low down, so as to shade the trunk from the hot sun. The foliage, judging from your description, must be affected with some fungous disease, which could very likely be held in check by spraying with Bordeaux mixture. But it may be a question with you as to whether this will pay. It is oftentimes some of the most valuable sorts that are most liable to disease, but the hardier sorts, such as Early Richmond and Mayduke, may be quite exempt and do well. You had better find out what varieties the larger cherry-growers in your section find profitable, and their management, as frequently, owing to peculiar local conditions, one variety may flourish over a limited area, while some sorts that are successful elsewhere fail.

**Grape Cuttings and Grafts.**—S. O. M., Walla Walla, Wash. In growing grapes from cuttings it is important to have wood well matured, of this season's growth. By mature wood is meant that which is hard and has very little pith; wood that is soft and pithy will not root well. Grapes are grown from cuttings of several kinds. Soft or green wood cuttings are made during summer and treated in the same way as florists' roots, geraniums and similar cuttings, but is practiced only with rare kinds. Most of our grapes are grown from ripe wood, but the way of doing it varies considerably; sometimes they are made up of only one bud and an inch or two of wood, but this method is best adapted to the growing of varieties that are rare and which it is desired to increase very rapidly. The simplest method of growing grapes from cuttings is to make the cuttings about twelve inches long as soon as the leaves fall in autumn; tie in bundles of about one hundred each, and bury outdoors, covering six inches



over the top, standing bundles on end with the butts down. Early in the spring take out bundles and bury them again, standing them on the top ends, covering the butts about four inches deep. They should be left in this position until they have commenced to callous a little, which always precedes rooting; but this should not be allowed to go so far as to emit roots before planting. They should then be planted out six inches apart in rows three feet apart, in warm, mellow soil, setting them at an angle of forty-five degrees and so that the upper bud comes barely above the surface soil, as shown in illustration. The land should be made solid around the base of the cuttings, and they should be carefully cultivated throughout the season. The reason why the cuttings are buried right side up in fall and upside down in spring is that the roots form first on the warmest ends, and in the autumn the deep soil keeps warm the longest, while in spring the top soil warms up first. The reason why the cuttings should be set slanting is that then they are most easily formed in that position, and then, too, they settle with the land and do not work loose so easily as when set straight. I have had the best success in grafting grapes when I have done the work very early in the spring, putting the union below ground and covering it with three or four inches of earth. Follow the same method as for grafting apples, but when old, crooked-grained stocks are to be worked by cleft-grafting make the cleft with a fine saw. No wax is necessary, and some growers prefer not to use it, but tie the cleft together and pack the soil firmly around the union.

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## Our Farm.

### EDIBLE AND POISONOUS TOADSTOOLS.

At this season of the year it is no uncommon thing to see in the daily press accounts of poisoning from the eating of toadstools. In the majority of cases the sufferer has thought he was eating an edible species, and has only discovered his mistake when it was too late. Since these instances are so common a brief discussion of a few of the principal edible and poisonous toadstools may prove useful to persons who, at present, have no knowledge of them, but would enjoy eating those that are harmless if they knew how to distinguish them from the harmful.

Let it be borne in mind that it is often difficult even for experts to distinguish the edible from the poisonous species when not fully expanded, and that therefore the immature specimens, "buttons," as they are called, should be allowed to expand before being gathered. Let it also be remembered that all over-ripe, all decayed, all doubtful specimens, all doubtful species and species known to be poisonous be passed by when collecting for the table. These may by simple contact leave sufficient poison among the edible ones to produce fatal results even when they are removed before the edible ones are eaten. Again, it is absolutely necessary that the collector know the variety he collects to be fit for food—know it as well as he knows a cabbage or a bean.

The figures that accompany this article are not made to show the botanical characters of the species discussed, but are conventional drawings made to show the easily recognizable differences between them.

The common mushroom (*Agaricus campestris*), Fig. 1, appears in clusters during the late summer and early autumn, and is most frequently found in rich ground, such as gardens, grassy fields and especially pastures, but rarely in woods and never on rotten wood. The stalk and the umbrella part are usually whitish or drab, and are smooth. The latter is usually less than four inches in diameter, and the former generally shorter than the diameter of the umbrella. The ring is usually a little more than half way up the stem. But the distinguishing point is the color of the "gills" on the under side of the umbrella. These are at first pink, gradually turning to a brownish purple as the plant grows older. This point must be borne in mind, since many fatal results follow the overlooking of this characteristic. The stalk is solid, cylindrical, and seems to come directly from the ground, having no membrane or scales or bulb at its base, but carrying the usual collar where the umbrella part breaks loose from the stem as the top expands. There is only one poisonous toadstool that in any marked degree answers this description, but it is of such extremely rare occurrence that danger is not one in one hundred, and it has so disagreeable a taste that no one would care to eat it.

The fly-amanita, or fly-agaric (*Amanita muscaria*), so named from its attracting and

than the stem of the edible mushroom. The gills are always white, never pink or purple. Its stem is hollow and is bulbous at the base, which is covered with irregular fringe-like scales. Fig. 2 gives an idea of the wart-like excrescences on the umbrella, and the swelled base of the stem.

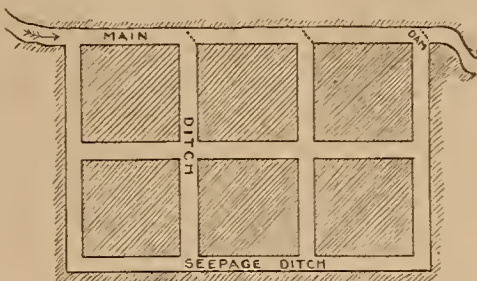
The deadly amanita (*Amanita phalloides*) grows singly in damper and less sandy soils than its close relative, the fly-agaric, and generally avoids lawns, pastures, etc., where the common mushroom thrives. The umbrella may range in color from a dull yellow to olive, but is often shining white, and when wet is more slimy than either of the two preceding species. It is practically free from scales. Its size is intermediate between the two preceding, and the form is much more slender. The gills are white and so is the stem, which, when young, is filled with cotton-like threads. These soon disappear and leave the stem hollow. The base of the stem is more bulbous than that of the fly-agaric, and is surrounded by a sac-like membrane, from which this toadstool takes the name of "death-cup." Since the stem is often partly under ground this membrane is frequently destroyed when the toadstool is pulled. Fig. 3 shows this species and the cup-like membrane just below the surface of the ground.

These three toadstools have each a pleasant taste, the first two a peculiar odor, the last scarcely any smell. It is evident, therefore, that taste and smell alone cannot be relied upon as a test of poisonous or edible qualities.

One other common edible toadstool seems to demand attention in this article. This is the fairy-ring toadstool (*Marasmius oreades*), a small species that grows in clusters arranged in the form of an ever-widening circle. Sometimes these circles are ten or even more feet in diameter, and the circumference so closely studded with the little toadstools as to make the ground look as if covered with a band or continuous ring. The umbrella part, seldom more than two inches in diameter, is very thin and of a pale yellow brown or drab, often concave on top, with a raised center. The gills are few in number and bulge out in the middle. The stalk lacks the collar common to the other toadstools mentioned above. Both stalk and umbrella are rather tough, often, in dry weather, even leathery. This condition disappears after a rain. The spores, or seed-bodies, are white, while the only species that might be mistaken for this one have black or brown spores. The color of these minute bodies may be determined by allowing the umbrella to stand with the gills down upon a piece of white paper. Enough spores will be cast off in an hour or so to determine their color. Fig. 4 gives a rough outline of this species.

It is admitted that a description of such apparently characterless objects as toadstools may be a little difficult for the novice to grasp, yet it is believed that sufficient has been said to enable him to distinguish these four plants. He must bear in mind, however, that the identification of specimens by some one that knows is better than either description or picture, or both together. It is, nevertheless, unwise to

valley and prairie states, where drought frequently injures late crops. The plan is best suited to low, flat valleys, especially the river or creek bottoms where the surface strata is a sandy loam or vegetable composition. In the mountain regions where the water and lava made soil contains alkaline substances the continual practice of seepage-irrigation destroys land fertility. I have seen fields that once produced six hundred bushels of potatoes to the acre so completely mineralized from seepage-irrigation as to be worthless, except for growing joint-grass and saleratus-bush for early spring pasture. While this danger exists in the West there is practically no such troubles to fear in the central and eastern states. Seepage-irrigation, if



IRRIGATION BY SEEPAGE.

properly managed, would certainly work wonders in fruit-growing and hay-making in every state, even in the greatest rainfall belt.

The system is very simple, consisting of a main ditch and laterals carrying water to the land, where it is impounded and left to percolate through the soil. Dams of wood or stones are thrown across the main to raise the water to fill the laterals, when the head-gates are closed. A good plan is to have wooden gates made by inserting boards into slots much the same as the tail gate of a wagon-box. The seepage-ditches should be deep enough to hold a good volume of water, and dug close enough together to allow the moisture from parallel laterals to meet beneath the surface. On some soils water from ditches three feet wide and two feet deep will percolate two hundred feet or more in twelve hours. I have run water around a block of one and one fourth acres in two-foot ditches, and soaked the entire area with one filling of the laterals.

In some of the river valleys throughout the Northwest the farmers depend entirely on natural seepage for growing crops in the lower bottoms. This could be improved and crops made more certain by cutting trenches around and across the fields and conveying the water through as drain-ditches are used for carrying off surplus. But to get the best results from seepage the water should stand as in pools or reservoirs and find its natural outlet through the soil. Sometimes these open seepage-ditches are filled with logs, stones, brush or other material and plowed over the same as a perfect subirrigation system. If any reader doubts the value of seepage-ditches let him visit the valleys of the Arkansas in Kansas, the drought sections of California or the river bottoms of eastern Oregon during a dry season, and he will become converted to underground-irrigation, even though he resides in New Jersey or on the Florida coast.

JOEL SHOMAKER.

### CALF-FEEDING EXPERIMENTS.

The Utah Experiment Station reports in Bulletin No. 57 the results of some recently conducted experiments in calf and pig feeding, as follows:

(1) Calves may be raised very profitably on skim-milk when it is properly fed.  
(2) From the standpoint of gain in live weight and quality of meat whole milk is the best food for calves, but it makes too expensive a ration to be profitably fed. Butter fat has been worth 16 cents a pound. The gain in live weight of these calves at 4 cents a pound returns but 10.7 cents a pound for the butter fat feed at 3 cents a pound for the gain but 8 cents a pound.

(3) The calves whose rations were composed largely of skim-milk, while they gained one half a pound less a day, required practically the same amount of dry matter to each pound of gain as did those fed on whole milk, they made just as good use of the food.

(4) The calves fed whole milk alone gave a greater proportion of dressed meat to live weight than did those fed on skim-milk, and also gave more fat on the carcass.

(5) Young calves, up to three and one half months of age, required less milk and less dry matter to each pound of gain than did the hogs. When the calves were five

and six months old, however, more dry matter was required, but at least half of it was hay.

(6) When fed to calves, fully as large financial returns were obtained for the skim-milk as when fed to hogs. With the gain in live weight at 4 cents a pound, the calves returned 22 cents a hundred pounds for the skim-milk, and the hogs 22.8 cents. If the gain in live weight was worth 3 cents a pound, the calves would return 5 cents a hundred pounds more for the milk than would the hogs.

### EXTRACTS FROM CORRESPONDENCE.

FROM VIRGINIA.—We had a very dry summer, but got fair crops of wheat and corn, and a very large hay crop. Quite a lot of seeding to wheat will be done this fall. Land is much better in price than for several years. Several farms have sold lately for \$30 an acre and over. This is a fine grazing country, and a large number of cows are kept. The milk is shipped each morning to Washington, D. C., fifty miles distant. Camp Alger was on the line of the railroad from this county to Washington, and many visited it to get a glimpse of war-life. We had plenty of all kinds of fruit, except apples. Sheep are worth \$4 and \$5 a head; horses, from \$50 to \$125 for fine ones; cows, from \$20 to \$45; hogs, from \$4.50 to \$5 a hundred-weight; corn, 30 cents a bushel; wheat, 65 cents a bushel; potatoes, 75 cents a bushel; peaches, 80 cents a bushel; and day-hands get 75 cents a day and board. Farmers are improving their land more of late with lime and manure, and you can see the marked change in traveling over the county. Better buildings are being erected, and in many ways "Old Virginia" is looking up. S. M. J. H. Hillsboro, Va.

FROM NORTH CAROLINA.—Columbus county, in the Cape Fear river valley, is a productive country. It will make any crop that will grow in this latitude, such as corn, cotton, sweet and white potatoes, peanuts and all kind of garden-truck. Blue and other grasses grow well here. Most kinds of fruit do well, especially grapes, figs, pears and quinces. The timber is fine. Climate, location, water and health are all good. The range for cattle, sheep and hogs is excellent. We are between two railroads. We can ship by railroad or steamer to the large cities north or west. Land is very cheap—from \$3 to \$5 an acre. All who want to buy cheap lands and get a good home should come here and examine this country. We are near stores, churches, schools and two depots. Labor is cheap and good. B. T. T. Cronly, N. C.

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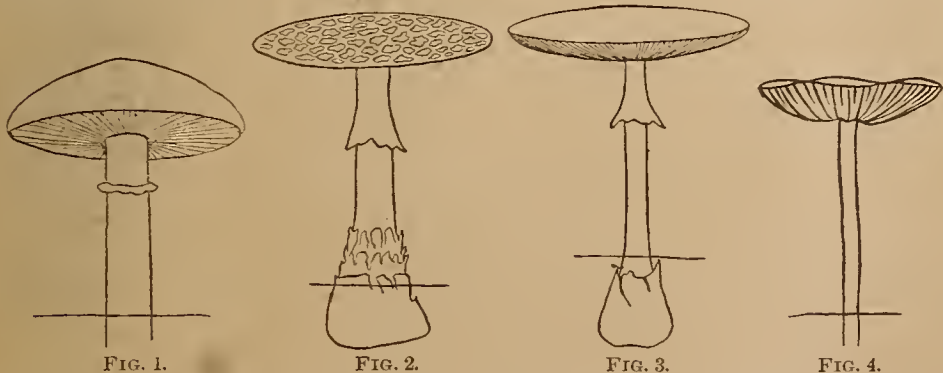
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killing flies, is a very poisonous sort, and is the one most frequently mistaken for the edible mushroom just described. It is commonly found in poor, gravelly or sandy soils along the roadsides, borders of fields and most frequently in woods largely composed of coniferous trees, but is rarely found in the haunts of the common mushroom. It grows singly, rarely in groups, and attains a very large size. The color of the umbrella part ranges from brilliant yellow to orange and not infrequently a deep red. Its upper surface is covered with prominent wart-like scales which can be readily rubbed off. The breadth of the umbrella is often six or eight inches from edge to edge. The stalk is fully as long as the diameter of the umbrella, often longer, and though stout is more slender

follow the advice of an authoritative comic paper that urges its readers to "ask the coroner" how edible and poisonous toadstools may be distinguished.

Some one may ask what is the difference between a toadstool and a mushroom. The term mushroom is given to a few species of toadstools that are well known to be edible. All mushrooms are therefore toadstools. A large number of toadstools are edible, and perhaps most of them are harmless, though of no culinary importance. M. G. KAINS.

### IRRIGATION BY SEEPAGE.

Seepage-irrigation is practised in some sections of the West, and is applicable to many districts throughout the Mississippi

## Our Farm.

### WHY SOME PLANTATIONS OF STRAWBERRIES DO BETTER THAN OTHERS.

**G**REEN'S fruit farm, twelve miles southwest of Rochester, is surrounded on all sides by fertile farms, and on several of these strawberries are grown for market in competition with the strawberries grown on Green's fruit farm. Although this has been a favorable season for producing a large crop of strawberries I find that other strawberry-growers in my vicinity have not met with anything like my success. The query is, why should my land yield an extraordinary crop of the largest-sized berries while other fruit-growers near by have secured only a small crop of smallish berries? This question I shall attempt to answer.

No one can hope to secure large crops of large strawberries on soil deficient in fertility. If the land is not rich, it must be made rich. My friend, J. H. Hale, grows large crops of strawberries on his poor sandy soil by applying from 1,000 to 2,000 pounds of commercial fertilizers to the acre. I have never deemed it necessary to apply such quantities of fertilizers to my fertile soil, which will produce a large crop of wheat or corn without any manure. I have, however, purchased by the carload manure from the Buffalo stock-yards, and have spread this manure on rows of strawberries as winter approached to protect them from heaving. I have also attempted to give every variety a light dressing of ordinary commercial phosphate, or of hen manure or ashes, or something of that character. Probably my competitors have not thus fertilized their strawberry-fields, and this may be one reason of my greater success.

Another reason for my success may be that I have kept my rows of strawberries narrow, not to exceed six inches in width. This has made it possible for me to keep the soil between the rows thoroughly cultivated up to the time the first berries began to ripen, being careful not to allow the teeth of the cultivator to run deep close to the rows so as to destroy the strawberry-roots.

The principal object of my strawberry-plantations is to furnish young plants for transplanting; thus I narrow the wide matted rows early in the spring by digging with a spade-fork from each side of the row more than half the amount of plants the row contains, aiming to leave the matted row six inches wide. In one sense this is not a matted row, since the runners have been allowed to take root undisturbed and to run away from the center instead of being gathered in toward the center, as would have occurred had each row been kept narrow by running a cultivator and by not cutting off the runners thus gathered in a mass along the row. Be assured that wherever strawberry-plants are growing in a dense mass fine fruit or large quantities cannot be secured. By my method my narrow matted rows contain plants not closer together than four inches. I should prefer not to have the plants closer together than six inches in a narrow matted row.

While I do not need the young plants for transplanting, I have found it profitable to destroy more than half of the plants in a wide-planted row by plowing a shallow furrow away from each side of each row as early in the spring as possible, and keeping the ground well cultivated thereafter until the fruit begins to ripen. I believe then in a narrow row of strawberries, with the plants not closer together than four inches apart, but do not attempt to locate each strawberry-plant at any particular distance apart.

Another reason for my success may be that I have what I think all of the best of the newer and older varieties under cultivation. I have had years of experience with varieties, and have learned which varieties are the most profitable on my soil and which may not be equally profitable on other soils. Every grower has to decide for himself such as will do the best with him and on his peculiar soil.

My soil is composed of sand and clay. It is a strong wheat-producing soil, which will become hard if not worked with the hoe or cultivator. It has been a query with practical strawberry-growers whether such soil as mine is superior to sandy soil for growing strawberries. I am unable to decide. There are a great many kinds of sandy soils, some being fertile and some infertile.

CHAS. A. GREEN.

## THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

### THE MARKETS AND THE SUPPLY.

In winter the egg markets in the cities are never supplied with fresh eggs. Even in summer, when the prices are sometimes low, the cost of keeping the fowls is greatly decreased; in fact, on the farm the cost is barely noticeable and the egg-production steadily increases. It is a great mistake to select the best pullets and send them to market in the fall and early winter, and reserve the culls and old hens, and from them expect the egg-supply during the winter. These fowls, if confined for a few days in a fattening-coop, can be made ready for market, and then farmers can retain the true egg-producers at home. Of course, it is expected that every one will be humane enough to prepare warm and dry quarters for their poultry, besides see that they have a proper allowance of food, and always a supply of fresh water, for in winter all domesticated members of the barn-yard are forced to depend on man for proper care, and if one is not willing or humane enough to attend to this duty, by no means undertake the raising of fowls, as it would be but to inflict needless cruelty on the lower animals which are under his care, and which it is the duty of all to protect. And more, our farmers may not only supply our own markets, but provide eggs for export. It is said that the egg-supply from our three largest egg-producing states is not sufficient to supply the New York market alone. Remember the number of large cities and towns we have, and if this be true, consider how small the egg-production of this country really is. We should depend upon ourselves, keep this amount of money at home and benefit our country. Poultry-raising and the production of eggs pay. Not only should we be dependent upon ourselves, but other countries should be dependent upon us. No land, no climate, none with natural advantages can do so much as this. We have excelled in many things, and should do so in this.

### THE NON-PRODUCERS.

In all flocks will be found hens that consume twice as much food as others, and that is where the difficulty of knowing how much to feed is experienced; but it matters not how much a hen consumes if she produces eggs. It is the hen that eats and gives no returns that makes the cost large. When but a portion of the flock is laying the unprofitable hens should be disposed of. The retaining of non-layers, in order to procure eggs in the future, makes the eggs too costly. Hens will eat anything that a cow will accept, and is also partial to animal food. Such being the case, she may be fed on food of all kinds and in great variety. It is just as reasonable to expect a cow to be productive when given nothing but corn as for the hen to do so, and if this fact is kept in view at all times there will be fewer mistakes in feeding. It is cheaper for the farmer to feed a variety than to confine the fowls on a limited diet.

### WIRE FENCES—PORTABLE AND STATIONARY.

It is now time to commence separating the different breeds, and some will prefer to fix up their yards and runs before the frost is out of the ground, so as to set posts. A good way to make a light, portable, also a durable fence without setting posts is to take an inch strip two inches wide and set it on a foundation, say from three to four feet long. It may be two by four inches, a slab board or otherwise. To this upright tack boards or wire and set them on the ground, the pieces fastened at the bottom; then brace with a piece of wire tacked to the ends of the board, and about two feet from the ground, on the upright. If you use wire netting, which is the cheapest in the long run, it can be braced at the corner posts and does not need to be so high, as fowls cannot see to fly over it, and is so open that it cannot easily be blown down. If breeding-pens are adjoining each other there should be boards at the base to keep the males from fighting. In buying wire get narrow width, as you may sometimes want to use it for runs, coops, etc. If one is not wide enough you can use two, and they are just as cheap and much easier handled. To make a fence of a permanent kind, not portable, for a small yard at but little expense use stout posts and one rail at the top and another at the bottom.

The fence must inclose the yard on all four sides. Next securely fasten galvanized iron over the yard, across from one top rail to another. This is to keep the netting from sagging in the center. Now fasten the netting to one lower rail outside, carry it over both top rails and over the wires, and fasten it to the opposite bottom rail, and your yard is covered at the top and two sides. Separate pieces of netting fastened to the top and bottom rails may be used to cover the remaining two sides. To make the expense as light as possible have the fence only a couple of feet high. The fowls get as much ground surface as if the fence was higher. If the yard is small the wires may be dispensed with. The advantage in galvanizing the wire is to prevent rusting, which would injure the netting. The cheapest wire is that which is the most durable.

### SPACE FOR A FLOCK.

An acre may accommodate not over two hundred hens, but one hundred would be nearer the number. A flock of a dozen hens should have a house about ten by ten feet. No flock should be larger than fifty hens. A house ten by one hundred feet may be divided into four apartments. Allow one hen for each foot on the front of the house, or one hundred hens for one hundred feet length of house. It is better to begin with a few—not over one hundred hens—and increase each year so as to gain experience. No inexperienced person should give up a position for the poultry business. Going into the business for health is where mistake is made. The raising of poultry in large numbers is a business requiring hard work and capital. One not fitted for it can lose money, and health, too, but he can succeed by beginning at the bottom and learning how to manage, as the business cannot well be understood except by practice.

### CRACKED CORN.

Cracked corn is excellent food for chicks if given with other kinds. Fed exclusively to chicks they will starve on it, because it does not contain sufficient of the muscle-producing and bone-forming elements. It is like feeding a human being on one kind of food; it may be palatable for awhile, but soon becomes repulsive. Chicks should have a variety. It is not necessary to give a bill of fare for them. Simply feed anything that they will eat, such as cracked corn, wheat, pin-head oatmeal, bone-meal, sharp grit, finely cut clover, lean meat, milk curds, millet-seeds, cabbage, cooked potatoes, turnips, or any food, but no one kind exclusively.

### FATTENING THE TURKEYS.

Get ready for Thanksgiving, as it is not far off, by having large and fat turkeys to sell. Make them grow by allowing them meat and cut bone once a day, with a good feed of grain at night. About two weeks before selling them put them in a large yard and feed bread made of two parts bran and two parts corn-meal, two parts ground oats and one part linseed-meal. Give this as a morning meal. At noon give chopped clover sprinkled with corn-meal. At night give corn and wheat. A pound of crude tallow to four pounds of the bread will be an advantage. Fed in this manner the turkeys should be very fat in two weeks.

### STUDY THE DEMAND.

If one has a number of regular customers aim to learn what each customer prefers, and never deliver to a patron anything that might be inferior in the eyes of the customer to that desired. Some customers will ignorantly select eggs or poultry as possessing certain qualities, and will not be convinced otherwise. The customer, however, is the judge, and his decision is final. The object of the farmer should be to please the customer in all cases.

### BUYING HENS FOR WINTER.

The desire to keep a large flock of hens for winter leads to buying from neighbors. When so doing keep in view the fact that the best way to avoid disease in your flock is not to bring it in. Buy only hardy and vigorous hens free from lice, with scarlet combs, bright eyes, and which are active and willing to forage and scratch for food at all times.

### EXTRACTS FROM CORRESPONDENCE.

**WILD-TURKEY BLOOD.**—In a recent issue of FARM AND FIRESIDE you ask for the experience of readers with wild turkeys. I have used a half wild gobbler with Bronze hens for two years, and think them much superior to any other I have ever raised. The young are very hardy and easy to raise. I winter ten hens and raise from one to two hundred young turkeys each year. While the wild blood tends to make them great ramblers, if allowed their freedom, they also bear confinement well.

Mrs. O. M. H.

Rock Valley, N. Y.

### INQUIRIES ANSWERED.

**Brown Leghorns.**—S. M. M., Geneva, N. Y., writes: "What is the difference between single-comb and rose-comb Brown Leghorns in laying qualities?"

REPLY:—There is no difference in any respect, except in the shapes of the combs.

**Capons.**—L. B. R., Woodbury, N. J., writes: "Which is regarded as the best cross for capons, so as to combine quality of flesh and large size?"

REPLY:—Use Dorking males with hens of the Brahma or Cochins breeds. Indian Game males are also considered excellent for the purpose.

**Sorehead.**—D. W. B., Bennett, Ala., writes: "My chickens have what is known here as sorehead, the whole head, eyes, etc., being covered. Give a remedy for the difficulty."

REPLY:—It is peculiar to the South, and is parasitic, although the symptoms of chicken-pox are very similar. A remedy that has given success is to anoint once a day with two parts cedar-oil, four parts ichthyol, and enough flowers of sulphur to thicken the mixture to a paste.

**Ticks on Fowls.**—W. T., Grapeland, Cal., writes: "My fowls are covered with ticks. I can get rid of the ticks in the poultry-house, but wish to know how to rid the fowls of them."

REPLY:—It can be done by dipping the hens in weak kerosene emulsion, but such method as dipping may injure the fowls. Sprinkle them daily with fresh insect-powder, and if it fails try the dipping process. Sheep-dips or the advertised remedies for lice will destroy ticks.

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## Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

**For Lice on Cabbages and Cauliflowers.**—F. W., Saratoga, N. Y. Use kerosene emulsion, strong tobacco-tea or tobacco-dust.

**Lime Deposit in Tea-kettles.**—J. P., Willow Ranch, British Columbia, writes: "What will keep alkali out of a tea-kettle? We are very much troubled with it here."

**REPLY:**—When "hard" well or spring water is heated, the carbon dioxide is driven off, and the minerals, usually lime, held in suspension by it are deposited. If you use hard water you cannot keep lime out of the kettle, but you can facilitate its removal by placing an oyster-shell in the kettle, on which it will be deposited. The shell can be cleaned occasionally, or a fresh one put in.

**Protecting Meat from Insects.**—W. H. S., Marshall, Ark., writes: "If J. F. A., East St. Louis, Ill., when he hangs his meat will wash off all the salt, immediately sprinkle it liberally with pulverized borax and rub until it lathers, and hang it in a dry place, he will have no skippers, bugs or other insects, even if it should hang there twelve months. If this glazing with borax is well done the meat will not become rancid. It needs no smoke. Borax is not poisonous, but it should not be eaten with the meat; the cook can easily wash and scrape it off. About two pounds of borax is sufficient for one thousand pounds of pork."

**Early Onions.**—Mrs. "C., Hartford, Mich., writes: "When is the best time to put out onion-sets, that we may have the onions for early spring use?"

**REPLY BY T. GREINER:**—For very earliest green onions I know of nothing better than the Egyptian-free, or winter, onion. Sets of this should be planted in September, or possibly earlier; in fact, as early as the (top) sets are ready. Ordinary onions to be used for spring bunching, such as White Pearl, Prize-taker, Yellow Dutch, etc., sometimes winter over all right and give a good crop if sets are planted in the fall (any time before freezing); but they are an uncertain crop, after all, and we prefer to plant in early spring. The Egyptian onion is as hardy as an oak, and safe from injury by cold.

**Planting Raspberries and Blackberries.**—J. W. K., Kentville, N. S., Canada, writes: "When is the best time to set out raspberries; that is, to dig up shoots and transplant them?"

**REPLY BY T. GREINER:**—The general practice is to set raspberries and blackberries in early spring, and that is a safe time, although not any better than fall. In fact, we can set red raspberries, and to some extent blackberries also, almost any time when the ground is not frozen. I have often taken up the new sprouts during the summer with a spade, and transplanted them to vacant spots in the row. Of course, spring planting has the advantage that the land can be freshly prepared, and will remain in best shape for the plants to grow right along, while land prepared in the fall will soon be packed solid by winter's rains and snows.

**Cider.**—A. K., Fruitland, Wash. In reply to your inquiry about making cider we republish the following from a former number of FARM AND FIRESIDE:

"To make choice cider select sound, ripe apples. Make the cider in cool fall weather. Carefully filter it as it runs from the press; every particle of pomace should be removed. Put the cider into a sound, sweet cask, and keep it in a cool place. Insert a small rubber tube in the bung, which should fit tightly. Let the tube bend over and the end hang in a vessel of water. The carbonic-acid gas formed in the cider will pass off through the tube, no oxygen will be admitted, and fermentation will be prevented. After standing awhile in a cask the cider may be drawn off and bottled or put into small stone jugs. Seal the corks carefully, and keep the bottles or jugs in a cool, dry place. Various things are used in cider to keep it sweet. Some are good; some spoil the flavor; some make it unfit for use. By trial you can find out which are reliable.

**Cutting Asparagus-tops—Easter Lily Bulbs.**—Y. C. W., Grand Junction, Colo., writes: "Please tell me what time to cut the tops from an asparagus-bed, and how to prevent them from seeding. Last year I did not cut them till late, and this year there were hundreds of seedlings.—When shall I pot an Easter lily bulb, and how long should it remain in the cellar to have it bloom for Easter?"

**REPLY BY T. GREINER:**—Young asparagus seedlings are often very annoying in an asparagus-bed. We avoid all trouble by banking up every spring over the rows (in order to have nice bleached stalks) and cultivating level again after the tops are cut. Treat the seedlings like weeds. Also try to cut the tops just before the seeds are shed.—You can pot the Easter lily almost any time in fall if it is to be kept in a cool room, where only the roots will develop. Then bring it out into a warm room or greenhouse about six weeks, more or less, before bloom is wanted, the exact time depending on the chances the plant has so far as degree of heat and amount of light are concerned.

**Sit or Set, Which?**—A recent communication reads: "Please have your whole corps of newspaper men look in a dictionary. It's 'sitting,' 'sitter,' 'sitters' and 'sitting' eternally. People 'sit,' hens set. For years I have hoped you'd find out the difference yourselves. Do, do try to print 'English as she's spoke.' Do!" A DISGUSTED READER.

**REPLY:**—"Physician, heal thyself." Look in a dictionary yourself. You will find cause to regret that you did not do so years ago; for if you had done so you would have been spared all attacks of that "disgusted" feeling. To the dictionary you have appealed, and by the dictionary shall the question be decided. Webster's International Dictionary, in defining the verb "sit," says: "To cover and warm eggs for hatching, as a fowl; to brood; to incubate." As the partridge sitteth on eggs, and hatcheth them not.—Jer. xviii.11.

In defining "sitting" it says: "A brooding over eggs for hatching, as by fowls." The male bird . . . answers her [the female] with his songs during the whole time of her sitting.—Addison.

Under "set," referring to the misuse of the word, the same standard authority says: "The use of the verb set for sit in such expressions as the hen is setting on thirteen eggs; a setting hen, etc., although colloquially common, and sometimes tolerated in serious writing, is not to be approved." People sit, and so do hens; people set hens, and the hens sit—if broody and not too contrary.

**Combating Cabbage Pests.**—In Bulletin No. 144, just issued by the New York Experiment Station (Geneva), is given a new and effective remedy against cabbage pests, which is made as follows:

"After repeated tests an excellent material for securing uniform distribution and perfect adhesion has been found in a resin-lime mixture. In preparing this mixture it is necessary to make a stock solution from the following formula: Pulverized resin, five pounds; concentrated lye, one pound; fish-oil, or any cheap animal oil, except tallow, one pint; water, five gallons. Place oil, resin and a gallon of water in an iron kettle, and heat until resin is softened; add lye solution made as for hard soap; stir thoroughly; add remainder of water, and boil about two hours, or until the mixture will unite with cold water, making a clear, amber-colored liquid. If the mixture has boiled away too much add sufficient boiling water to make five gallons. For use, one gallon of this stock solution is diluted with sixteen gallons of water, and afterward three gallons of milk-of-lime or whitewash added. The resin mixture is in reality a liquid soap, and the addition of the lime turns it to a hard soap, which remains suspended in the water in minute particles. The poison, one fourth of a pound of Paris green or other arsenite, is then added, and the particles of poison adhere to the finely divided soap particles and are thus distributed throughout the mixture in minute and uniform quantities. The soap solution is very adhesive, and thus a thin film of poison is made to stick to every part of the leaf which is touched by the spray. The application must be made by a hand-power machine, either a strongly made knapsack or barrel sprayer, as no horse-power machine will do the work thoroughly or carefully enough upon cabbage and cauliflower."

From many tests the station concludes: "(1) That resin-lime mixture and Paris green, thoroughly and carefully applied when plants are one third grown and again just before the heads are formed, will almost wholly prevent damage to late cabbage and cauliflower; (2) that the expense need not exceed two dollars an acre, and (3) that there need be no danger to the consumer from such treatment."

## VETERINARY.

Conducted by Dr. H. J. Detmers.

To regular subscribers of FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

**NOTE.**—Parties who desire an answer, to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

**Garget.**—T. W. Osceola Mills, Wis. What you inquire about seems to be nothing more nor less than a common case of garget. The only rational remedy while it is yet time consists, as has been repeatedly explained in these columns, in frequent, energetic and thorough milking as the only means to effect the necessary removal of the clots and coagulations without injury to the mammary glands. In some cases it is necessary to milk every two hours.

**Foundered.**—O. L. R., Rubens, Kan. If you had given to your cow, of which you say that she got foundered in a corn-field, a pound of sulphate of soda instead of a large dose of castor-oil she probably would have been well in a short time, and you would not have spoiled her appetite. Maybe that a good dose of soda together with either a little mustard (freshly powdered mustard-seed) or some ginger will yet do some good. The doses of either of these two spices is from half an ounce to one ounce. Beyond this I do not see what you can do now to any advantage but to bestow good care.

**Was "Locoed"—Died of Colic.**—W. J. M., Imperial, Neb. Stockmen in the Southwest who have experience with "loco"-poisoning all seem to agree that an animal once thoroughly poisoned with the loco-plant, *Astragalus mollissimus*, and other varieties, will never fully recover. Having no experience of my own with loco-poisoning worth speaking of I cannot advise you what to do with your mare.—Your two other mares probably died of so-called wind-colic, causing a surcharge of the blood with noxious gases and, in consequence, death by suffocation.

**Knuckles Over.**—C. W. R., Fulton, N. Y. The tissues of your young mare, only four years old, are probably yet too soft, lack firmness, to be able to stand steady hard work, hence the most severely taxed ligaments give way and the animal knuckles over. Exemption from work for at least several months and a sufficiency of good and nutritious food, combined with voluntary exercise, will probably effect a cure, and at any rate will be beneficial. Whether or not beneficial results can be obtained by judicious bandaging to support the weak pastern-joint, or by an application of liniments, depends upon the condition of the joint, and can be decided only by an examination.

**Epizootic Ophthalmia.**—J. F. McC., Agricultural and Mechanical College, Normal, Ala. What you describe is a case of epizootic ophthalmia, or infectious ceratitis. In certain districts it is quite common among cattle kept during the summer months on dusty pastures and commons, where they are exposed to the dust in the atmosphere and the glare of bright sunlight. In districts in which it once has made its appearance it is apt to reoccur in the following summer, so that in some districts it has become stationary and an annually returning trouble. As a rule it terminates in blindness only in those cases in which abscesses are forming on the cornea or in which the latter becomes perforated. In the beginning it is advisable to apply twice a day an eye-water consisting of an aqueous solution of corrosive sublimate (1 to 1,000 or 2,000), or of an aqueous solution of nitrate of

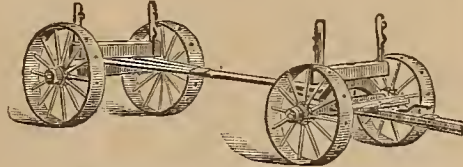
silver (1 to 250). For either solution distilled water should be used as the solvent. The applications are best made with a glass pipette capped with a rubber bulb, a so-called dropper.

**Cows Failing to Breed.**—J. K., Freeburg, Ohio. That some of your cows fail to get with calf may be due to various causes: (1) It may be that they have not been bred at the proper time. (2) They may be too fat. (3) They may be tuberculous. (4) They may suffer from uterine diseases (catarrh, for instance). (5) The secretions of their genital mucous membranes may be acid. (6) There may possibly, though not very likely, be something in their food or in their keeping that prevents conception. (7) The fault may not be with the cows, but with the bulls, who may lack exercise or be otherwise ailing. Try to ascertain the cause and then, if possible, remove it. So, for instance, if you find by testing the secretions of the mucous membranes of the genital organs with litmus paper that the same show an acid reaction, you may neutralize it, just before the cow is served, by an injection of a weak solution of carbonate of soda; or if there is the least suspicion that some of your cows are tuberculous, subject them to the tuberculin test and thus get reasonable certainty either one way or the other.

**Pseudo-erysipelas — Bog-spavin.** — E. McC., Hopkins, Mo. The ailment of your four-year-old mare appears to be pseudo-erysipelas, or, as I would prefer to call it, mud or dirt erysipelas. If there is not yet too much degeneration and callous thickening of the skin covering the swelling on the lower surface of her chest and abdomen, make twice a day a liberal application of a mixture of liquid subacetate of lead one part and olive-oil three parts, and then keep the animal on a clean floor, with clean bedding, and out of mud, manure and water.—Bog-spavin, or a hock-joint gall, which is the same thing, consists in an abnormal enlargement of the capsular ligament of the hock-joint, expanded and bulging out by an increased production of synovia. It can be decreased or temporarily removed by an application of continued gentle pressure, or also by persistent applications of iodine preparations, but the effect of such a treatment will not be lasting, and the bog-spavin is apt to return, unless the causes which produced it in the first place can also be removed. As the same consist in defective mechanical proportions or formation of the joint itself, in too great a laxity of tissue or in too much hard work, the removal of the same is either very difficult, or in many cases impossible. Hence a treatment, although apparently successful, will as a rule be followed with disappointment in the end.

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## Our Fireside.

### GOLDENROD.

Spring is the morning of the year,  
And summer is the noontide bright;  
The autumn is the evening clear  
That comes before the winter's night.

And in the evening, everywhere  
Along the roadside, up and down,  
I see the golden torches flare,  
Like lighted street-lamps in the town.

I think the butterfly and bee,  
From distant meadows coming back,  
Are quite contented when they see  
These lamps along the homeward track.

But those who stay too late get lost;  
For when the darkness falls about,  
Down every lighted street the frost  
Will go and put the torches out!

—Frank D. Sherman.

## THE LOST WILL

BY WILL ALLEN DROMGOOLE.

### CHAPTER II.

#### CLIPPING THE OLD CAT'S CLAWS.



WESLEY meanwhile was climbing the wood-yard fence. He had taken even a more round-about way to get home than he had done to get away, for he knew that by this time his stepmother had missed him and would be watching for him to return. Once in the yard he seized the ax and went to work on the woodpile. At the first stroke she was upon him, her face, good-looking enough when in repose, was literally frightful with anger. Perhaps in all her life she had never been so angry. She turned upon the boy like a tiger:

"Where have you been, sir?" she demanded. "And how dared you leave the work I gave you to do? Where've you been?"

Wesley buried the ax into a poplar log and turned at bay. In that short space of time he had decided upon his course. Yet how many things had flashed through his mind in that little moment; things that could have been so easily said and that would so quickly and quietly have settled the matter. He might have told her the cows broke out of the lot, and that he had gone to head them back again; he might have said the hogs were in her flower-bed, or that the mule had kicked a young colt that was a great favorite with her. A half dozen plausible reasons for his absence came to him, were on his lips, indeed, and would, any one of them, have saved him a whipping. But above every one sounded his father's admonition, his warning "not to lie" to her.

"If it comes to a lie or a beating don't hesitate," his father had told him, and he did not hesitate; only, he was a boy, and perhaps a beating had about it as little to fascinate him as it had for other boys. Yet the hesitation or the temptation gave him time to decide upon his course. It occurred to him that if he could make her angry enough to thrash him she would forget the origin of the quarrel in her indignation over his impudence. So, with one hand resting on the ax-handle, he looked her squarely in the eye in that insolent, don't-care-if-I-do way that a boy can assume sometimes, and said:

"It ain't any of your business, now, what I've been doing."

"Oh, it ain't, eh? Well, we'll see about that. You just follow me to the woodshed, sir. And you might be saving time by stripping off that there jacket as you come. Just shed it all, it'll save time. None of my business, eh? We'll just settle that first, and then you can wash up them dishes. Think you'll leave it all for me, and you go skitting off to the woods; bird-trapping, like as not. We'll see—we'll see about that right now."

She led him into the woodshed behind the kitchen. The fact that he did not go as reluctantly as might have been expected was lost upon her. Once, when he gave a palpable start, she fancied he was frightened, and her hold upon his collar tightened. But Mrs. Womack had not seen that which her stepson had seen plodding along over the snow-covered hill, down the big road, in the direction of the house. When he darted into the shed, however, he almost gave her a key to everything that had transpired that morning. For he went in with entirely too much alacrity for a boy about to be beaten into subjection and thrashed for disobedience. For his thought was, when he sighted Mr. O'Bryan's old roan trotting leisurely over the hill, "If I can keep her in here until father can have a word with Mr. O'Bryan, all will be well." So, when she had closed the shed door and prepared to begin his punishment, Wesley did that which in all his life before he had never for one moment thought of doing; he lifted his hand and seized his stepmother's arm. Then he began shrieking and begging for mercy. Mercy! How Nora O'Bryan would have said the "ould cat set her teeth" could she have seen the look that came into Mrs. Womack's face as she attempted to bend the boy's head between her knees.

They had a great struggle for the lash that had hung upon the wall, and after that

another five minutes had to be consumed in getting hold upon the boy and bringing him down to his knees; and then Wesley took his beating. Not, however, with his customary dogged silence, for never before had he been anxious to prolong his punishment. He plead, and howled, and broke away from her hold, and had to be collared again and again, to again break away. And at last his stepmother, after chasing him over the place for ten minutes, promised him that if she ever did lay hands on him again she would give him just precisely one hundred lashes. And she did it, Wesley keeping the count, with his head between her knees and his heels in the air, and wondering as each blow fell how many words could be said before the next one. For he calculated that every blow meant so much of good to somebody, in the long run.

Ah, had he but known, had he but dreamed, that he was really fighting for his own—for that which had been his mother's before him! Could he have but known what was going on in the sick-room he would have kicked, and pranced, and hellowed yet more, done anything, indeed, to prolong the blessed little moment given his father for righting a great wrong.

The sick man's hand rested on the visitor's knee, and the visitor's head was bent to catch the quick, whispered words that fell from the pallid, bloodless lips of the invalid:

"Mike," said he, "I'm going soon, mighty soon, I'm thinking. I want to make my will, and she won't give me a chance. She never has given me a chance. I've tried this two years to get a chance to see a lawyer, and she's watched me like a hawk watching a chicken. It's my boy's place. I couldn't meet his mother and tell her I gave it away to some one else. I made a foolish will just to please her when I was first married, but it mustn't stand. I never meant it to stand. You've got sense, more than sense enough to dodge her, and I want you to get a lawyer to me. Peaceable, if you can, for I do want to die in peace. And

out your orders, ma'm, Oi'll be afther hurrying back before the mistress tires herself with waiting, or Oi'll find myself with two sins to answer for in the stead of one, sure, now."

Mrs. Womack hesitated; she did wish to see those samples; they were new ones, and Nora O'Bryan always got the best and prettiest that could be found. She hesitated, then stepped squarely into the trap the crafty Irishman had set for her.

"If you don't mind sitting with pap a spell," said she, "I'll run over and speak to her myself, Mr. O'Bryan."

"In welcome, ma'm, in welcome," said Mike. "Maybe then she'll be more loike to overlook my laving the strips of string behind, ma'm, if you will go over and see them at the house. Just say to her, ma'm, to lave the door-key under the mat, ma'm, if you plaze. She's that absent-minded she'll fetch it to town with her and l'ave her ould mau to eat suow and warm his hands in the sun's rays, will Nory O'Bryan."

When she was gone Wesley set about clearing away the dishes while the men talked in his father's bedroom. He forgot his back was bruised and sore; all he cared to remember was that he had done his father's bidding, and had, even at such a cost, secured to him the coveted word, in secret, with his neighbor.

That neighbor was chuckling until he could hardly keep his seat in the chair.

"Sure," said he, "swate toime they'll be having foinding the samples, Misther Womack, sir."

"What!" said the sick man, "do you mean to tell me you had none?"

"Niver a sample, and niver said Oi had any," laughed the Irishman.

Mr. Womack shook his head; experience had taught him that Mrs. Womack was a woman of deep insight.

"She'll nose you out, Mike," said he; "she'll nose you out, sure as you're boru, man."

"But niver my Nory," said Mike. "She's in Misthress O'Bryan's hands by this time. Oi put

O'Bryan afraid; sure, and Oi would. Why, didn't he say to me the last time he was home for holiday, didn't he say, 'Ma'm Nory, says he, 'and what's the greatest of all cowards, now?' 'Oh, git out with you, Timmy,' says Oi; 'be off!' 'Well,' says he, 'it's stepmothers. The half of them be scared to death what folks will say of them, and the other half be scared to death what they won't say; and so,' says he, 'they're all cowards.' And with that he begins to punch me in the back whilst Oi punch him in the ribs, the taze. And once says he to me, says Tim, 'An Irishman's no farmer; Oi want to go to college.' And says Oi, 'An Irishman's no farmer, is he? Then,' says Oi, 'where do the pigs and potatoes come from, Tim?' But he didn't give in about the college. 'Baby,' says Oi, 'and ain't you a pretty one to be talking about college?' But he wouldn't give it up, noways, and so at last says Oi, 'Go on, thin, if you must, and have the country sayin' you couldn't live along of a stepmother, and had to get out from home, you.' At that he fires up, and says he, 'The one says that will have to whip Tim O'Bryan,' says he. At that we hugged, and cried some, and Timmy went to school in the town. Yes, yes; come in, Misthress Womack; Oi'll be just tying my bonnet-strings while we talk, ma'm, and you be telling of me what Oi can do for you over in the town, ma'm."

Mrs. Womack, breathless, explained that she hadn't a moment to stop, but that if Mrs. O'Bryan would let her see the samples she would look up a pattern for a dress. "Goodness knows, she needed one." Mrs. Nora drew in her breath with a gasp. "Samples?" said she. "Samples?" She was about to say, "What samples?" when she remembered herself, and said, instead:

"And why didn't that forgetful Irishman, Mike O'Bryan, look in his hat and give you the samples, and save you the long, cold walk, Oi'd like to know?"

"And so he did," said Mrs. Womack, "and there were no samples there."

Mrs. O'Bryan gasped again; she had been very near striking a snag; she turned about double-quick, and said, with careless indifference:

"Then he dropped them on the way, Oi'll be thinking."

"No," said the visitor, "he did not; I came right behind him, and his horse's tracks were the only ones in the snow; that is, the only ones leading to my house."

Clearly, Mrs. Womack had a whiff of a mouse somewhere. And Mrs. Nora was quite as positive of this as though she had borrowed her neighbor's nostrils. She at once took a new tack:

"Well, well, it's no matter; he's got them tucked about him somewhere, it may be. But Oi'll tell you, Misthress Womack, there was a nice bit of black; wide, glossy and r'asonable. Just the thing for you, Oi said the minute Oi clapped my eyes on it. You'd better be afther letting me bring you out a pattern, Misthress Womack. A good black is a handy thing in the house at all times, Misthress Womack. Oi've had one hanging in the closet this many a year."

Was it wit, chance or character-reading that prompted the Irishwoman's course? Whatever it was, she felt that she had struck the right chord in her neighbor's heart; at once she was in smooth water. She knew that a black dress would be needed in the house before many weeks, or even days, should have passed; she dared not leave home long enough to go to town and purchase it; to ask a neighbor to make such a purchase for her at such a time was not to be thought of; it would be all over the neighborhood directly.

Still, seeing that she hesitated a bit, Mrs. O'Bryan gave her an encouraging word.

"Come, come, neighbor," said she, "you're a sensible woman; look at things in a sensible way. What would you do with only a blue and a black gown in the house should you be stricken with a death in the family, as you are likely to be? Look at the thing sensible, Misthress Womack."

"I do need it," Mrs. Womack admitted, "but it looks mighty as though I was fixing up for pap to die."

"He can't get well," said Mrs. O'Bryan. "You know that as well as everybody else in the neighborhood. You'd as well be ready for whatever may happen."

"W-e-e-l-l," said Mrs. Womack, slowly, more than half inclined to doubt this good Irish neighbor of hers after all, "you may bring me out ten yards of the black, then."

"And fixings?"

"No, I've got fixings that'll do. But, sakes alive, I haven't brought over a cent of money—"

Mrs. O'Bryan laid a hand on Mrs. Womack's shoulder.

"Let be, neighbor," said she. "Mike O'Bryan's got the money, and you can hand it back when you get the goods, and that's time enough for it."

A little later she watched Mrs. Womack disappear over the hill, and soon after that Mike's roan mare came trotting, rather briskly for her, over the same spot at which the unsuspecting neighbor had made her exit from view.

Five minutes later Mrs. Nora dragged a sample of black dress-goods out of a book, where it had reposed for some weeks, and, cramming it into Mike's hand, said:

"Do you drive to Morrison's and get ten yards of that, quick. And remember, it was Oi as went afther it, Michael O'Bryan, and not



"IT AIN'T ANY OF YOUR BUSINESS WHERE I'VE BEEN."

I'd feel safer if she doesn't know I made a new will; I'd feel the will was safer. You get me a lawyer, neighbor, somebody will—"

And right there the door opened, and Mrs. Womack entered. Her hard features, still red and distorted with the exercise of beating her unruly stepson, seemed to pass unnoticed by the good-natured neighbor, who rose, hat in hand, and bowed so low he couldn't see the flushed face before him.

"Good-morning to you, Misthress Womack," said he. "Sure, Oi'm early for a visit. Oi'm afther thinking; but Misthress O'Bryan, ma'm, be afther going into the town to see the b'y at school, and she's wanting to know if she can't fetch out something for you, being as you've sickness in the house. And she's got a lot of foine samples—"

The big Irishman began to fumble in his pockets; first his coat-pockets, then his vest, and last, deep down in his trousers-pockets; then he looked in his hat, stammered, and tried to say:

"Faith, ma'm, and Oi must 'a' left the samples at home. Oi don't know what Nory'll be thinking of me, for sure, now. She'll be afther fretting some, will Nory; because she says to me, 'Now, Molke, don't forget the samples; because Misthress Womack will enjoy seeing the new patterns; and her cooped up this long while with the sick.' But if you'll make

her there; Oi plotted; Misthress O'Bryan will execute. Nory's my executioner; she'll head off the inimy, sure, now."

"Did you post her?" asked Mr. Womack, anxiously.

"Divil a bit," laughed the Irishman. "But Oi'll trust my Nory. She knows Oi fetched the samples out a wake since, and that'll give her a clue, if one's naded. Be aisy, now, be aisy; she can't overhandle my Nory. Lord, Lord, but wouldn't Oi like to peep in and see how Nory handles the couundrum Oi've sent her this day!"

She handled it as his faith had foreseen. When the visitor's head appeared over the hill Mrs. O'Bryan's buggy appeared at the front gate. Mrs. O'Bryan was talking to herself as she tied on her best Sunday bonnet.

"Faith, and it makes me think of Timmy," said she, "whiniver Oi see the poor b'y up there to Womack's. He's that cowed as Tim would niver be, not to save the life of him. Why, Tim, he's as sassy as a jay-bird, and as jolly. And so would this one be if he dared. Haven't Oi caught him trapping squirrels in the woods, and laughing fit to kill, with the little naggers on the place? And didn't he give the naggers the game for fear if he'd fetch it home for his own supper she'd find he'd been running off to the woods with them, and give him a thrashing, poor b'y! Oi'd lolke to see Timmy

you. No, niver a step will you be afther taking out of this house this day, not if there's any b'ating of the ould boy around the stump, Oi warn you."

As he rode away with his double commission Nora O'Bryan turned back into her kitchen, and said to herself:

"It's the highest to lying you've ever come. Nora O'Bryan; sure, and it is. But jist the same, Oi'm not at home to-day."

Upon the whole, she rather enjoyed the fun of "getting ahead of the ould cat," and aiding in "meting out justice all around."

But her work for the boy, for whom her tender sympathies had been aroused, was not finished, had she but known it. The hardest part remained yet to be done. For Mrs. Womack was keenly alive to the fact that her husband was restless and unhappy concerning the boy, and she felt that her own title to the lands was in jeopardy. Yet she resolved to hold on to what she had, if possible, arguing that she could take care of the boy until he was able to take care of himself; but, since he was a boy, he would soon be able to take care of himself. As for her, she was a woman; she knew what it meant for a woman to take up the burden of a livelihood. She had tried it. So she resolved that the property meant more to her than it meant to the boy, and she was determined to hold on to it. She would see to it that no lawyer got into the house, even if forced to order Michael O'Bryan out of it.

Michael O'Bryan, meanwhile, was riding away to the county-seat in Mrs. O'Bryan's light buggy. And as he went he was planning. Sometimes he chuckled in a manner that would not have been encouraging to the sick man's second wife. Occasionally he talked aloud to himself, and this was the burden of that which he was saying and thinking as he drove into the town that morning in January:

"She'll fix it; Nory'll fix it all right. Oi'll thrust to Nory O'Bryan. All Oi have to do is jist to explain the lay of the land to her, and if she doesn't get the stepmother out of, and the lawyer into, that house over the hill, then my name's not Michael O'Bryan, no."

And again he chuckled, and again Mrs. Womack's stock in the plantation went down. But he had a harder job on hand than he had contracted for; he had no idea of the wonderful resources of a scheming woman's mind.

(To be continued.)

A NECESSITY IN EVERY HOME.

The American homes of to-day that do not count a musical instrument of some kind among their household treasures are lacking a sweet influence that every family would be the better for having. Although this fact has been generally recognized for many, many years, particularly by the parents who appreciate the refining and elevating influence that music has over the children, yet until of late the cost of pianos and organs, the standard home instruments, has been so great that people in moderate circumstances could not afford to buy.

But the world forges ahead, and to-day the opportunity is given to all, by at least one reliable firm, to secure a piano or organ of excellent workmanship and great beauty, and purity of tone, direct from the factory at manufacturer's prices, which, as everyone knows, is far below the usual selling price. This refers to the well-known and reliable house of Messrs. Cornish & Co., of Washington, New Jersey, who manufacture the World Celebrated American Pianos and Organs.

This firm has immense factories in which are employed 400 skilled workmen, each one a master hand in his particular line of work. The factories, which are immense, are lighted throughout by electricity in order that they may run day and night during the busy seasons, and the seasons are generally all busy ones with them. Visitors, who are always welcome at the factories, may here follow the piano or organ from its babyhood in rough lumber, to its full perfected prime, as exhibited in an elegant sweet-toned instrument that would bring joy to any family. All the new Cornish Pianos are fitted with the latest and best musical attachments, imitating perfectly a great variety of instruments, and all Organs have the new Multi-tone Orchestral Action.

Messrs. Cornish & Co. have long enjoyed a splendid reputation, and are more and more strongly endearing themselves to the public at large, by selling directly from the factory, thus putting within the reach of many an instrument which they could not otherwise hope to possess, did people have to pay the enormous profits made by agents, dealers and music-stores.

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A very handsome Art Souvenir Catalogue is issued by Messrs. Cornish & Co., which fully describes fifty different styles of American Pianos and Organs. It is beautifully illustrated and has a colored frontispiece that is well worth framing. Any of our readers can get one for nothing by simply writing for it to Messrs. Cornish & Co., Washington, New Jersey.

NATURE'S COMPASS SIGNS.

Trees having more limbs on the south side and more moss on the north side; gums being softer on the south side, tops of cedar and hemlock pointing toward the south, hearts of trees being nearest north side, etc., have no more existence, in fact, than the widely believed condition of the goose-hone, feathers on partridges' legs, thickness of corn-husks and hornets' nests, and muskrats' houses have to do with the weather. They exist only in imagination. In over fifty years' traveling the woods, in company with some of the best men (both Indians of several tribes and white men) who ever trod our Maine woods, I have yet to see any man who ever received the least assistance from any of the sources mentioned. Trees, as a rule, do not branch more to the south. Spruce and fir, whether crowded or in open spaces, branch nearly equally on all sides; pine and hemlock and all hard woods branch most toward the nearest open space; being crowded on one side they reach out toward the room offered on the other.

Trees moss up sometimes on one side, sometimes on the other, sometimes all around, according to the slope or the exposure. One might hunt a week in the woods to find a tree with gum on both sides, unless some tree on a spotted line, as the gum exudes from cracks or wounds, and trees very seldom are cracked on both sides; and if any tree were cracked on both sides, in cold weather the gum would all be frozen so hard no one could tell.

I have had many thousands of both cedar and hemlock trees cut, and can say positively that neither have tops pointing in any given direction; usually they point straight up. I have had more than ten thousand cords of wood cut, and the heart is in the center, except in cases when trees, especially pine, grow with the south side exposed to the sun on the edge of an open space.

The whole thing is theory, with no facts, but if all stated were true, it would not help a man any if he were in doubt as to his course in either a rain or snow-storm, which are the only cases in which a real woodsman needs any help, as in a thick snow-storm or rain one cannot see which sides are most mossed or which way tree-tops point. All the men I ever traveled with either depended somewhat on a compass or went by intuition; that is, they find their way just as an animal does. They carry the north point in their heads. I have been with excellent woodsmen who depended entirely on a compass, and equally good ones who never carried a compass. Most carry a compass, but on no account ever look at it, unless it is very cloudy or storms or is very dark. When very dark they light a match and take a look just to see if they are varying much. I have traveled hours at a time when too dark to see a man ten feet, unless he were dressed in white. We never think of any of the things mentioned, but we note carefully the course of all brooks and every high land, and the courses of the ridges, when we first travel a new country.

Some men are horn woodsmen; some learn; many can never learn. Our guides tell me that not one man in ten they guide can go a mile straight back from a road and turn around and get back within half a mile of where he started without a compass. A compass is usually of no use to a man who is lost, as he will not believe it.—Forest and Stream.

WORLD'S LAZIEST PEOPLE.

The laziest and dirtiest people in the world have recently been discovered in the Caucasus. They live in an inaccessible mountain range between the Black sea and the Caspian sea, and as they were two thousand five hundred years ago so they are to-day. Seen from without there is a certain picturesqueness about a Caucasian village, although it merely consists of miserable stone hovels, without any attempt at form or adornment.

Within the houses they are inconceivably dirty. They are filled with rags, vermin and dirt of every description. They possess no fireplaces or chimney. All the cooking, in fact, is done over a hole scooped out in the middle of the floor. In these houses men, women and children are huddled together. During the long winter months they are shut in for days at a time, the cattle often sharing their quarters. Every aperture has to be closed on account of the cold.

This long imprisonment is perhaps the cause of the degradation of the people. Horrible diseases result from it, which are aggravated by abnormal consumption of arrack, the strong distilled drink of the Asiatics.

Besides this, it is an invariable rule to make four days a week holidays, with saints' days as extras. Since they have adopted the holidays of every other country with which they have been in contact, it is not surprising that the men find little time for work. Farming, bee culture and cattle-breeding are the only industries of these people, while throughout their territory there is not a single manufactured article.—New York Ledger.

"In four hours' work to-day," writes Mrs. Fan Stevens, Paw Paw, Mich. "I got nine orders for 'American Women' with WOMAN'S HOME COMPANION. It is a most beautiful and very valuable book, and my first order will be pretty large. Will send for books in four or five days."

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## Our Fireside.

## HOW JACOB WON THE WIDOW.

BY MATTIE DYER BRITTS.

SHE was the prettiest little widow in Glenville, and she had a cozy cottage and thirty acres of the finest land in the county, all in her own right; but it was not the land or the money honest Jacob Clark was after. He had cherished more than a fancy for pretty Tillie Winkle before she was ever married at all, but Josiah Gray came along and proposed to her while Jacob was getting up courage enough for the same purpose.

So she took Josiah, and poor Jacob said nothing, but he would not go with any girl, and there were a dozen who would have jumped at him, for he was a fine, generous fellow, and would be sure to be good to a wife. He saved up a little money and bought a bit of a grocery-store not far from the Clark cottage, living there, too, and doing his own cooking in a kitchen back of the shop.

Time went on, and Jacob was a bachelor of forty-two when Josiah Clark died and pretty Tillie was left alone.

"Maybe now there'll be a chance for me," said Jacob to himself, and he resolved not to be so bashful this time, but speak as soon as it was at all proper to do so. Meantime, Mrs. Tillie had a niece as pretty as the aunt used to be (and she was almost as sweet yet) come to live with her. And about that time Jacob offered a partnership in the grocery to his nephew, Tom Evans. Tom lived with his uncle, of course, and it was not long before Tom and Lena Myers, the pretty niece, were head over heels in love with each other.

Jacob saw it plain enough, even before Tom told him one day that he had asked Lena to marry him, and she had said she would if she could be free to leave Aunt Tillie.

"But, Tom," said she, "I promised that I wouldn't leave her, not for anything, when I first came, and I can't break my word, you see. We'll have to wait. Maybe something will turn up so I can say yes, and then I will, for I do love you, Tom, with all my heart." She was not a bit afraid to tell him so, the free, frank, true girl, no nonsense about Lena, which made Tom the more sure he had chosen wisely.

"Can't you say something to help us, Uncle Jake?" asked Tom, in distress. "You are an old friend of Lena's aunt; maybe she would listen to you if you asked her to let us get married."

"I don't know, Tom, I don't know," answered Jacob, slowly; then, with a second thought, he told Tom about that old time, and how much he wanted Tillie himself.

"That's the very idea," cried Tom, in great glee. "You marry the aunt and then she won't be left alone. Go ask her, Uncle Jake; do go ask her!"

"Well, wait a bit," said Jacob. "I haven't been to see her yet, and I can't ask her the first time I go."

"Yes, you'll let some other fellow get ahead of you again," said Tom.

"No I won't; be sure of that. You tell Lena to keep still, and you do the same. I'll go up there next Sunday night."

So when Sunday came, and Tom took Lena out buggy-riding, Jacob went to the cottage and kept Aunt Tillie company. Not a word did he say of love-making, but the same thing happened several times, and Jacob couldn't help seeing that Tillie liked to have him come. At last he spoke to her about the young folks, and told her that Tom was just breaking his good honest heart for pretty Lena, and wouldn't she let him have her?

"But, you see, I can't live all alone," said Tillie. "Lena came to stay with me, and I don't see how I can give her up."

Jacob came over and took a seat very near the widow's, and then he said:

"Tillie, I want to tell you a little story. Once, ever so many years ago—about fifteen, I guess—there was a fellow who loved a girl so much that he didn't dare to tell her so. And while he was trying to along came a young farmer who had the courage, and he married the girl, and the other fellow never could get over it. He lived alone for all those years, only because he never could care for any other girl."

Tillie was blushing now, but she made out to answer:

"Ain't many men can stay faithful to one love that long."

"Well, this fellow did. He went into business, and he used to think that if ever that girl had any children he would leave all he made to them, for her sake. Why, come now, you needn't turn so rosy red; she didn't have any children, but after awhile she was left a widow, and a nice girl, a relation of hers, came to live with her. There was a young chap living with the old bachelor by that time, and the two youngsters got to liking each other, and the bachelor, knowing how it hurts to lose the one you love best, wanted them to marry, but the aunt wouldn't let the girl go. Don't you know who I mean, Tillie?"

"Of course I do," said Tillie, looking confused and ready to cry. "And I suppose you think me a cross, hateful old thing, every one of you."

Jacob quietly took one of the plump hands lying in the widow's lap, and said:

"If anybody dared to say that of you, Tillie, I'd be fit to kill 'em, I would; I didn't tell you to scold you, but because I've got a way out of the matter if you will say so."

"Well, what is it?" and the widow did really not have the slightest idea he was going to say what he did next.

"It's for you and me to live in one house, Tillie dearest, and let Tom and Lena have the other."

Tillie caught her breath, and gave one look at him; then she began to cry, shaking her head as she said:

"No, Jacob, I can't do it! I can't do it! It's no use asking me—I can't!"

"Can't you ever learn to like me a little bit?" asked Jacob, sadly, with a deep sigh which cut her to the heart.

"I—I wouldn't need to learn, Jacob, I know that now."

"Why, Tillie," he threw one arm around her and was going to take a kiss, but she pushed him back.

"No, you mustn't—it don't alter the case. I can't marry anybody, Jacob—never, never."

"But why, then, dear one? You are free, ain't you?"

"No, no; I am bound by a promise I daren't break."

"A promise? My goodness, who made you promise a thing like that?" cried Jacob, in surprise, not to say indignation.

At first Tillie would not tell him, but he prevailed upon her, and at last she confessed that Josiah got her to promise him before he died that she would never marry again, but live a widow always. Jacob did his best to convince her that it was a cruel, unrighteous promise, and she ought not to keep it. But all he could say would not move her.

"I like you, Jacob, and I think I could be happy with you," she said. "But I wouldn't dare break my word, unless I knew Josiah gave his consent. I'm afraid he would come back and haunt me."

"Oh, now, you don't believe in that nonsense?" exclaimed Jacob.

"Yes I do," was her answer. "I 'most know there are such things as ghosts, for my grandmother saw one. I've always expected to see one myself. If I broke my promise to Josiah I know I'd see one."

"You superstitious little goose! It would scare you half to death if you did!"

"No, I don't believe it would. I'd want to find out what it came for—they always come for something, you know, and 'most always to do somebody some good."

Jacob laughed uproariously at her, but he couldn't change her mind. So all he had to do was to go home and tell Tom how and why he had failed a second time with the pretty widow.

Tom shook his head and looked wise, but not beaten, and presently he said:

"I've found a way through, Uncle Jake! It's the best thing in the world she believes all that humbug."

"I don't see how it is to help the case," remarked Jacob, gloomily.

"Well, I do. She thinks she will see a ghost, so just let her see one. We'll have that loony old Josiah come back and tell her he releases her from her word."

"Tom Evans, are you gone daft? Lost what little sense you ever did have? Josiah can't come back—you know he can't."

"Oh, can't he? Perhaps he may, though! Wait till I see Lena—we shall need her help. Then I'll tell you the whole plan."

And Tom would be persuaded to say no more until the next evening, after he had taken a walk in the grove with Lena. When he came home he had a long talk with Uncle Jake, and at its close the old bachelor looked happier than he had since Tillie Gray gave him the mitten.

A week later there was to be some sort of an entertainment at the school-house, to which Tom was to take Lena. They used often to ask Aunt Tillie to go to places with them, but this time they said not a word, and after they were gone she felt a little badly over that, for it was a dark, gloomy evening, with a mournful wind sighing through the pine-trees in the yard, enough to make anybody lonely.

Tillie sat alone and thought over things until she began to sob softly and wipe her bright eyes, which were dimmed with tears.

"It wasn't—wasn't right of Josiah to—to bind me so!" she wept. "If he hadn't I needn't be lonesome. I'd have somebody to stay with me always, and he'd be—be so—so good to me! I wish I hadn't promised, I do!"

Just then the wind gave a terrible sigh and swept through the open window of the cottage with such force that it put out the lamp. The light from the street-lamp on the corner shone in through the window enough to show her where to find the matches, and she rose to get one, when the door softly opened and something white and tall seemed to advance into the room.

"What—what is it? Who—who are you? What do you want?" said the little widow, shrinking back and trembling all over. "Oh, I am so frightened!" She dropped helpless into a chair, as the figure answered, in deep, solemn tones:

"Fear not! I bring thee happiness!"

"Oh! what—what do you want? Who—who are you?" she could only repeat, in terror.

"I am the spirit of thy husband. I have

come to tell you that I set you free from your promise. I—I thought some bad man might want you for your property. Jacob Clark is a good man—"

"Oh, you know about it, then?" asked Tillie, recovering from her fright in her astonishment.

"I know. We know all things. He is a good man. Marry him and be happy, then I shall rest in peace. Farewell! I will come no more. You are free. Farewell!"

The white figure turned and slowly stalked from the room, shutting the door behind it, as the wind gave another heavy sigh.

"My goodness me!" breathed Tillie. "I did see a ghost after all! I always knew I would! I was scared at first, but I ain't a bit now. Only I wish—somebody—would come, so it wouldn't be so lonesome."

She slipped out of her chair, and still trembling in spite of her words, she got a match and lit the lamp. It was rather remarkable that she had hardly done so when a rap sounded on the door, and when she ran to open it there stood Jacob Clark.

"Good-evening, Tillie!" said he, coolly. "I knew the children were gone, and I thought you might be afraid with the storm coming up, so I came down."

And then, as Jacob walked in, he was surprised by Tillie fairly clinging herself into his arms, and saying, breathlessly:

"Oh, Jacob, I've seen him! He said I was free! If—if you want me, you—you can have me, if you'll take me, Jacob!"

"If I'll take you, Tillie?" Right then and there Mr. Jacob did "take her" into his strong embrace, and before the youngsters came home the whole affair was settled to the satisfaction of everybody. Jacob and Tillie were to keep the cottage and live in it, and Tom and Lena to take the little new house just going up across the street from the grocery.

But Tillie didn't see the two men when they left the cottage together stop in the corner of the yard and pick up a big bundle.

"I thought I'd smother in all this white stuff!" said Tom, in a low tone. "Didn't she take it all in fine? If all women were like her I wouldn't mind playing ghost every once in awhile!"

"Tom, you must never, never in your life let her get one inkling of this!" answered Jacob, soberly. "It was almost a shame to fool her so."

"Twasn't at all!" replied Tom. "We will keep it a dead secret forever, trust Lena and me for that! We only fooled her for the good of four people, and now you've won her, and I've won Lena, and you may thank me for it."

"I do, with all my heart," said Jacob.

## LITTLE BITS.

Mama—"I wonder why it is that Georgie plays and sings so much for Albert since they've become engaged? She never seems to cease from the time he comes into the house until he departs."

Papa—"I guess she wants to make sure that he really loves her."—Chicago Daily News.

In a primary school not very long ago the teacher undertook to convey to her pupils an idea of the use of the hyphen. She wrote on the blackboard, "Bird's-nest," and, pointing to the hyphen, asked the school, "What is that for?" After a short pause a young son of the Emerald Isle piped out, "Plaze, ma'am, for the bird to roost on!"

Rogers—"I tell you, old man, I saw the most remarkable exhibition of animal intelligence to-day that could be imagined."

Potts—"What was it?"

Rogers—"A bride and bridegroom started from the house across the street in which I live, and one of the horses attached to the carriage threw a shoe. Now, what do you think of that?"

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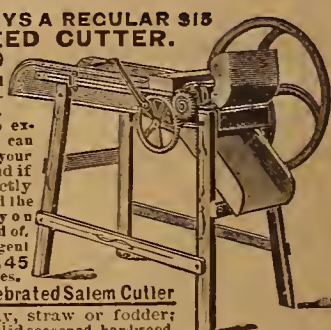
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THE ASHES OF COLUMBUS.

The Spaniards just now are wringing their hands at the idea of the ashes of Columbus falling into the hands of the detested Yankees. The remains of the great discoverer lie buried in the choir of the Cathedral of Havana. The dead body of Columbus has been as restless as that of our own St. Bede. It has never been able to find a quiet resting-place. The great sailor died at Valladolid, in Spain, on Ascension Day, 1506. He expressed a wish to be buried in the island of San Domingo. Joannes, his wife, took incessant care of the dead body of her husband. She carried it about with her when she traveled. For three years the body was deposited in the church of San Francisco in Valladolid, where it found its first resting-place. In 1513 it was removed to Seville. There it remained for twenty-three years. The body was again disinterred and carried across the Atlantic. It found its next resting-place in San Domingo, as Columbus had wished. When the island was ceded to France, the bones were taken to Havana and solemnly buried in the cathedral in January, 1796. What remained of the body was placed in an urn in a niche in the left wall of the chancel, and covered with a marble slab.

Recently the inhabitants of San Domingo have claimed that the bones of the discoverer of the New World still rest in their soil. The fact appears to be that when the bones were removed to Cuba the priests of San Domingo kept back half and hid them in the south of the sacristy of their cathedral. Here they were discovered in 1877. If the Spanish government again claims the ashes of Columbus, the restless spirit of the explorer will have to return to Spain, for every inch of the territory which he presented to his adopted country will have passed from her rule. The Havanese will probably not surrender their principal relic without a struggle.—London News.

DANGERS IN WALL-PAPER.

It is generally supposed that arsenic is about the only ingredient in wall-paper that is capable of inflicting serious injury upon the occupants of papered rooms. It has, however, been discovered that much mischief is done by the use of unscientifically prepared pastes by which the paper is applied to the walls. Paste is usually composed of flour, to which the glue and other substances are added. These often become damp, and are then liable to decomposition. If there is ultra-marine blue in the paper the acid chemical unite to form a disagreeable if not dangerous element, the odor of the room may become nauseating from the presence of sulphureted hydrogen gas. Where the paper is applied directly to the plaster there is less danger of disagreeable results, as the lime disinfects and sterilizes the paste, thus preventing the development of disease germs. Where paper is applied in several layers, that previously put on being allowed to remain, and the new paper pasted over the old, the danger is increased. In the various papers thus brought in contact there may be chemicals that, united or mingled by the dampness, will produce most active toxic qualities. It is therefore of great importance to remove all coatings of paper and wash the walls thoroughly before the paper is applied; especially is this the case in sleeping-rooms or in apartments that are continually occupied. In cold rooms there is less danger of fermentation of the paste than in those that are heated. Where walls are damp and rooms are kept quite warm sufficient poison may be thrown out to seriously affect the health of an entire household.—New York Ledger.

A MODERN BATTLE.

Suddenly we hear behind us a rumbling sound, which grows ever rapidly. We turn our heads, and there dashes past us part of the horse artillery, each horse lashed by his driver into fury, over logs, up knolls, taking ditches at a leap, with the heavy guns bounding behind them. The obstacles are such as would make the most dare-devil hunter approach with circumspection; however, this is no time for caution. Now they burst through a stiff hedge, gun after gun, with the wagons behind them. When they have passed, what was a hedge is now a plowed and shattered gap, a gap filled with weeds of bramble and black-born.

On rushes the whirlwind in its mad career, toward a low hill a hundred yards away. As they move a faint noise is heard far away, as of a person driving nails into the wall. It is the enemy's artillery.

Immediately following the discharge one of the leaders of a gun bounds madly forward. The gun gains fresh impetus. One more mad bound, and the horse falls, suddenly immovable. He is dead. His comrade is swung sharply around by the jerk; the horses behind, unable to pull up, crush over him; their drivers are flung off. The gun smashes into the mass, hesitates one moment, and slowly capsize. What was a moment before a team of gallant horses, proudly drawing at full swing their warlike load, has in a second become a snorting and struggling mass.

One horse is killed outright, the legs of two are broken. There is a moment's silence, then a couple of sharp reports, and three horses stand there trembling but alive. A fresh team must be obtained, and an hour's work at repairs lies before the gloomy gunners.—Pall Mall Gazette.

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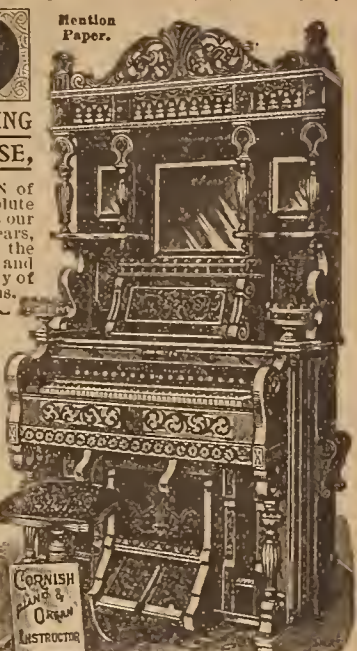
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BREAD THE WORLD OVER.

It is a curious and interesting study to compare the various materials which serve the different nations of the world as the basis of their bread. In this country, where good bread, made from spring and fall wheat flour, is within the reach of all, rarely a thought is given to the fact that, after all, the inhabitants of only a small portion of the earth's surface enjoy such food. In the remoter parts of Sweden the poor people make and bake their rye-bread twice a year, and store the loaves away, so that eventually they are as hard as bricks. Further north still bread is made from barley and oats. In Lapland oats, with the inner bark of the pine, are used. The two together, well ground and mixed, are made into large flat cakes, and cooked in a pan over the fire. In dreary Kamchatka pine or birch bark by itself, well macerated, pounded and baked, frequently constitutes the whole of the native bread-food. The Iclander scrapes the "Iceland moss" off the rocks and grinds it into fine flour, which serves both for bread and pudding. In some parts of Siberia, China and other eastern countries a fairly palatable bread is made from buckwheat. In parts of Italy chestnuts are cooked, ground into meal, and used for making bread. Durra, a variety of the millet, is much used in the countries of India, Egypt, Arabia and Asia Minor for making bread. Rice-bread is the staple food of the Chinese, Japanese and a large portion of the inhabitants of India. In Persia the bread is made from rice-flour and milk; it is called "Lawash." The Persian oven is built in the ground, about the size of a barrel. The sides are smooth mason-work. The fire is built at the bottom, and kept burning until the walls, or sides, of the oven are thoroughly heated. Enough dough to form a sheet about one foot wide and about two feet long is thrown on the bench, and rolled until about as thin as sole-leather, then it is taken up and tossed and rolled from one arm to the other, and flung on a board, and slapped on the side of the oven. It takes only a few moments to bake, and when baked it is spread out to cool. This bread is cheap (one cent a sheet); it is sweet and nourishing. A specimen of the "hunger-bread" from Armenia is made of clover-seed, flax or linseed meal, mixed with edible grass. In the Molucca islands the starchy pith of the sago-palm furnishes a white, floury meal. This is made into flat, oblong loaves, which are baked in curious little ovens, each oven being divided into oblong cells to receive the loaves. Bread is also made of roots in some parts of Africa and South America. It is made from manioc-tubers. These roots are a deadly poison if eaten in the raw state, but make a good food if properly prepared. To prepare it for bread, the roots are soaked for several days in water, thus washing out the poison; the fibers are picked out, dried, and ground into flour. This is mixed with milk, if obtainable; if not, water is used. The dough is formed into little round loaves, and baked in hot ashes or dried in the sun.—Sanitary Record.

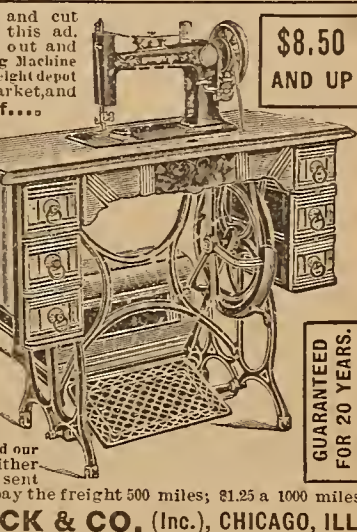
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SHE WAS BLIND.

A blindness comes to me now and then. I have it now. It is queer—I can see your eyes but not your nose. I can't read because some of the letters are blurred; dark spots cover them; it is very uncomfortable.

I know all about it; it's DYSPEPSIA. Take one of these; it will cure you in ten minutes.

What is it? A Ripans Tabule.

A new style packet containing TEN RIPANS TABULES in a paper carton (without glass) is now for sale at some drug stores—FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (120 tablets) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—or a single carton (TEN TABULES) will be sent for five cents.

## Our Household.

### WHAT'S A KISS?

"What's a kiss, father?"

"The welcome of love  
To a being immortal come into our arms,  
With its innocent, pleading and heart-winning charms,  
Bringing light to our life from the Father above—  
My daughter, the welcome of love is a kiss,  
Like this, my baby, like this and this."

"What's a kiss, brother?"

"A premium on faith  
In the gentle and pure one I have for my care;  
Who is always ready my burdens to share;  
Who is true to exception and loyal to death—  
My sister, a premium on faith is a kiss,  
Like this, my true one, like this and this."

"What's a kiss, sweetheart?"

"The cream of all joys  
And the nectar of gods that we mortals have stole  
From a cheek like a rose, or from lips ripe and full,  
Or a forehead that's fair, or the brightest of eyes—  
My sweetheart, the cream of all joys is a kiss,  
Like this, my precious, like this and this."

"What's a kiss, husband?"

"The keystone of rest,  
Which I have in the love and trust of your heart,  
As you form, more and more, of my being a part,  
While I lean on your arm or repose on your breast—  
My darling, the keystone of rest is a kiss,  
Like this, my dearest, like this and this."

"What's a kiss, baby?"

"The trend of my thought;  
It's the heart going out from the lips opened wide,  
To the one in whose bosom I nestle and hide;  
To the one who first loved me, and loved me for naught—  
Sweet mamma, the trend of my thought is a kiss,  
Like this, my mamma, like this and this."

"What's a kiss, grandson?"

"The homage of youth  
To the locks that are silvered with honorable years,  
To the face that is fairer as life's ending nears;  
To the life that is crowned with all virtue and truth—  
Grandmother, the homage of youth is a kiss,  
Like this, my mother, like this and this."

—R. W. Mecklin.

### HOME TOPICS.

**GRAPE CATCHUP.**—A meat sauce which is relished very much at my house is made as follows: Remove five pounds of grapes from the stems, wash them, then put them into a stone jar, and mash them with a potato-masher. Set the jar into a kettle of cold water so the water will come up as high on the outside of the jar as the grapes do on the inside. Cover the jar, and let the grapes cook until they are soft. Rub them through a fine sieve, put the pulp into a preserving-kettle, and add three pounds of sugar, one tablespoonful of ground cinnamon and one teaspoonful each of salt and ground mace and cloves. Boil this slowly twenty minutes, stirring it frequently to prevent it from settling to the bottom of the kettle, then add one half a pint of vinegar; let it boil up again, and seal it in pint jars or bottles. Of all cultivated grapes I like the Norton's Virginia best for catchup, but it is very nice made of the Concord or Catawbas.

**NASTURTIUM SANDWICHES.**—I thought the new ideas for sandwiches were exhausted, but at a luncheon a few days ago

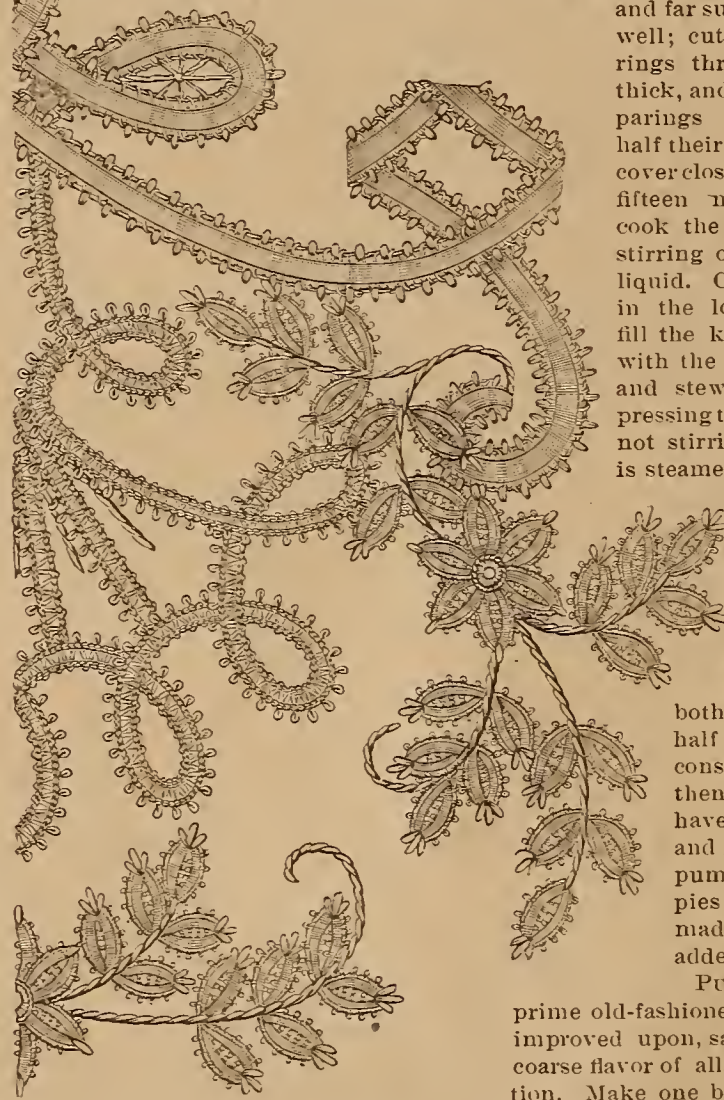


nasturtium sandwiches were served. To make them, cut thin slices of brown bread, butter them lightly with the best of butter, and then lay over them the petals of fresh nasturtium-blossoms, dust a little salt over, lay two slices together, trim off

the crusts, and cut the sandwiches into little triangles. The crimson and orange petals should show at the edges of the sandwiches. I had used nasturtium blossoms, leaves and seed-pods for garnishing salads, cold meats and other dishes, but

never had thought of making sandwiches of them.

**SPEECH AND MANNERS.**—There is such a close connection between good manners and refinement of speech that they cannot be separated; one seems the complement of the other. It is true that very few can keep their children entirely from contact with ill-bred people. They meet children from such families in the public schools, and must often see and hear things which we do not want them to copy. Here is one advantage of not sending children to school until their manners and habits of speech and thought are in a measure formed. I did not send my own children to school until they were nearly nine years old, and never regretted it. By that



age a child's tastes and habits are in a measure formed. When they have once learned that slang and coarse speech are marks of ill-bred people, while refinement of manner and speech is an indication of culture and purity, they will not be easily led into the former, or choose their associates from among the rough and uncultivated.

This training of children cannot be commenced too young. All loud, harsh tones of voice in their play with brothers and sisters should be corrected, and every child taught politeness and a proper respect for the rights and feelings of others. Of course, the factor of prime importance in this teaching is the example of parents. Never violate, by word or deed, the rules of good breeding in the presence of the children, if you would have them lay the foundation of perfect manners and speech as they grow older. The only safe and sure foundation of culture is purity of thought as well as act.

If one has been accustomed to careless, uncouth speech and manners in childhood, he may be kept in the best schools for years and become educated in book-learning, but the careless speech of childhood will "crop out," and often at most inopportune

times. The best and purest language is none too good for the expression of every-day thoughts, and a person's culture and education are judged by his manners, his speech, and even by the tone and modulation of his voice. If these habits

are correctly formed in childhood a good foundation is laid for culture and education.

MAIDA McL.

### THE GOLDEN PUMPKIN.

There are pumpkin pies and pumpkin pies, and the skill with which the fruit itself is prepared has more to do with their richness and flavor than we are in the habit of believing. Pumpkin baked in the shell precisely as winter squash for the table is drier and richer than it can be made by stewing. Washing or ironing day is a good time to make the pie, as it requires steady heat for several hours. There is a right and a wrong way, too, of stewing pumpkin, and the former (which follows) is no more difficult than the other, and far superior. Wash the fruit well; cut round and round in rings three fourths of an inch thick, and pare thinly. Pack the parings in the kettle, fill to half their depth with cold water, cover closely, and stew slowly for fifteen minutes; uncover, and cook the same length of time, stirring often, and strain off the liquid. Cut the rings of fruit in the longest pieces possible, fill the kettle to half its depth with the liquid, cover closely, and stew slowly and steadily, pressing the fruit down often, but not stirring until the top layer is steamed soft. After one hour

remove the cover and cook another hour, stirring often; then add as much salt as will be required for the pies, half as much sugar, and ground ginger or cinnamon, or both, and continue cooking half an hour, stirring almost constantly. The mass should then be nearly dry and have taken on a rich color and flavor. In making the pumpkin custard for the pies allowance must be made for the seasoning added to the fruit in cooking.

**PUMPKIN PIE.**—Whether a prime old-fashioned pumpkin pie can be improved upon, save by leaving out the coarse flavor of allspice, is a mooted question. Make one by the following recipe and judge for yourself: Use only the yolks of three eggs in the custard, and flavor with mace. When baked and half cold spread a thin layer of currant, grape or other sour jelly over the top (thinning the jelly if necessary), and heap a meringue made of the whites of the eggs and two tablespoonfuls of powdered sugar over the top. Yellow the meringue slightly, and serve very cold. A meringue can be added without the jelly, but the latter combines to impart a wholesome and delicious flavor.

**CANNED PUMPKIN.**—This fruit is as easily canned as any other variety. Choose late pumpkins, or rather do the canning late, as the fruit is much richer than early in the season. Prepare and stew as directed for pies, but do not season; stir smooth or press through a colander; fill the glass fruit-jars, shaking down often and vigorously, till to overflowing, seal, and keep in a dark, cool room.

K. B. J.

### USEFUL GIFTS.

That this idea prevails much among friends is more apparent about Christmas-time than at any other. However, one can always combine the useful and ornamental and make the gift more pleasing.

To one who always carries a bag for little things that cannot be carried in the hand a pretty one is very acceptable. The one illustrated is of black satin, with a pretty decoration of lace braid caught down with silk. It is suitable for an elderly lady on

dress occasions. The inner lining can be of chamois-skin, being faced at the opening with lavender silk. The other ornamentation is of fluted crepe de chine, in black, and black satin draw-ribbons. Near the top, on the inner side, should be put a small pocket to hold one's purse and door-key—two things so often needed quickly, and which will lose themselves persistently in the bottom of the bag.

A more serviceable one is made of oozel-leather in brown, pinked all around, except at the bottom, which should be of the doubled portion of the skin. The miniature carpet-sack, or Boston bag, is seen everywhere in the East. It holds any amount of shopping, and is always handy to have along. Since pockets in women's dresses are tabooed, resort must be made to some other receptacle, so the hand-bag more than fills the requirements.

The child's bib is made of linen, with the Renaissance embroidery. The border should be made double, and then cut out.

We also give a table-center border in the same work. It is all done in white nun's cotton, in buttonhole-stitch.

REX.

### APROPOS OF SLANG.

If young people would only take time to realize the importance of using words as nearly as possible according to their exact meaning there would be fewer young women who think it cute to wallow in the slough of slang. And how the slime of this slough sticks to those who immerse themselves in it!

When entering into an intelligent conversation it is well to avoid slang, for while a slang word or phrase may rouse a laugh, it usually checks the speech of the best thinkers and of the best talkers. It is quite true that slang is at times highly picturesque, and that it is often a labor-saving device to the brain. But in the main it is to thoughtful talking what



scorching is to the observant enjoyment of the more leisurely traveler.

Perhaps you will try to get along without slang when you see how the use of it is effecting the best interests of some one you know; when you see some attractive girl unappreciated beyond the circle of her immediate friends because of some little mannerism of speech offensive to those who would fain have been pleased.

For instance, do you like to hear a charming girl of a serene temper and of

an affectionate disposition continually saying, "I was so mad!" She may be annoyed, but in no sense is she as she declares herself to be, "real mad," "awful mad," or "just too mad for anything." It is probable that it no longer occurs to her that the exact meaning of the word mad is angry beyond the power of reasoning, crazy, and that with this one little misplaced word she has kept at a distance acquaintances who might have become warm friends.

Again, there is the girl who overuses the word lovely. To be lovely is to be possessed of supreme charm. Is a pudding or a salad or a meringue lovely?

"How tiresome!" you reply. "If I speak correctly I shall be obliged to think every time I speak." Precisely. And if you do not think, what you say is possibly of less value than the articulation of animals, who, at least, cry understandingly. Suppose you abjure slang for just one week, and keep to that resolve, buying no "perfectly elegant caramels," describing Dick as neither "sweet" nor "swagger," refraining from calling homely babies "perfect loves," nor, unless you are reverting to cannibalism, will you call the woman you admire "perfectly delicious," and you will learn to know something of the beauty of truthful speech. JEAN D. WHEATON.

#### CHILD'S COLLAR.

ABBREVIATIONS.—Ch, chain; s c, single crochet; st, stitch; tr, treble.

Roses, or wheels, are made first as follows: First row—Ch 12; join.

Second row—\* Ch 10, s c in loop; repeat from \*, making 6 loops in all.

Third row—Into each loop of 10 ch work 20 s c.

Break off thread, leaving it about 6 inches long; thread a needle with this, and fill in

Twelfth, thirteenth, fourteenth, fifteenth, sixteenth and seventeenth rows—Ch 5, 2 s c in 6 ch of previous row.

Judgment must be used in joining those rows to the roses up the front edges, as no exact directions can be given.

Eighteenth row—\* Ch 3, s c in 6 ch; repeat from \* until rose is reached, ch 3, s c in first petal on top, ch 3, s c in next petal.

Twentieth row—4 s c under each ch 3 of previous row.

Twenty-first row—\* 3 long tr (thread over needle three times), ch 3, 1 long tr; repeat from \* across the collar. This forms a place in which to draw ribbon.

Twenty-second row—4 s c under each ch 3 of previous row.

Twenty-third row—\* Ch 5, s c in fourth s c of last row; repeat across the collar.

Twenty-fourth row—10 s c under each 5 ch of last row.

This pattern is one fourth of the collar. MARY E. BURNS.

#### AN OLD GUIDE-BOOK.

"I may read all at my ease,  
Both of the new and old."

Or of the old applied to the new, for some things never change.

A goodly company of young people who have completed a course of study are now debating as to what to choose for a business or profession. At least six such have passed out and in my study within a few days to talk it all over.

They have no plans, no choice, really, only each one says he does not want to follow his father's business or learn his profession. The fathers are not as rich as the sons want to be, or they see the father has too much drudgery; never any let-up, as they say. These young men are not exceptionally minded. There are comparatively few who have heard any inner voice

subjection, and refuses to submit to the commands of those over him.

Waste no time, but choose as wisely as you can, then, says the author; prosecute the work diligently, remembering there is no easy work in the world. A course may be soon begun, but every one is sure of meeting with unforeseen rubs. There are very few, he says, who could imitate Crispus, the Roman, who, under a manner of negligence, accomplished whatever he undertook.

The book favors suitable recreation, for, as it says, "The bow too long bent is subject to breaking," yet it urges that diligence in all points is a thing of importance, and that every great and noble action owes unto it the means of achievement.

Cleanthes is quoted as an example of industry and devotion to learning thoroughly what he undertook. He was nicknamed the "well-drawer" by his companions, because he carried water for a gardener at night in order to earn money for paying his own way while studying. To-day there may not be water to carry, but there are students nowadays who wait on table and do menial things because of their purpose to study. This Roman was so poor that he made his notes on shells and bones, for paper was not cheap at that time.

The writer of the book constantly upholds the idea of persistent effort and of the danger of shirking. He says that "hot youth speeds unjustly, but catches nothing durable;" that it is not wise to trust to luck, the goddess of sloth and rashness.

This book tells the story of Alexander, who always slept with his arm stretched out of bed, holding in his hand a silver ball. There was a silver basin by the bedside, so if he slept too soundly the falling of the ball would waken him. The book everywhere urges persistent effort, says even the angels on Jacob's ladder were ascending and descending, but never standing still.

The youth is advised to read, whatever business he chooses; for, says the old book, by means of good reading one makes for himself a complete armor, to defend himself against the strokes of fear, fancy, ignorance and superstition. Especially does the writer advise reading history, saying it is a head-piece which will keep the fancy from danger, arm him against the changes of time and daily happenings in the world. It is wise to have sufficient skill in arithmetic, and a right way of keeping books, by which great trading may be put in little compass. The old book tells the youth to learn languages if there is time and opportunity, for he will find it advantageous to be a countryman to all Europeans.

Shakspeare makes one of the persons in "Twelfth Night" say: "Would that I had bestowed that time in the tongues that I have in fencing, dancing and bear-hunting! Oh, had I but followed the arts!" The author of the old book charges that success is a sort of purchased experience—purchased by hard work; that a wise man makes more opportunities than he finds.

But, says he, there is an inward thing which, unless it is added to these things, makes all as nothing. Be just to all, and be courteous. Courtesy is a token of nobility. It pays a great deal, yet is never poorer; it satisfies every man, yet lessens not the stock. It is a good character of a good nature. It is a kind of majesty to be courteous without pride or affectation.

Many examples are brought forward which would seem extreme to the young people of to-day, but they are worthy of study. I read the old book carefully, "all at my ease," and I remembered among the last written words of Eugene Field he said that his books spoke the same comfort—they never changed. Better than flowers, he said, these good books were, radiant, hopeful and helpful. So I found in the old book written two hundred years ago as sure a word for the youth just entering the world's business stage as could be written to-day.

As he said then, so is it true now, "It is a happy thing for a person to go through his affairs without injustice, which he can only do by being master of his affections and appetites." MARY JOSLYN SMITH.

That miserable feeling: head all stopped up, fever, aching bones and incapacity for work, show your need of a doctor's advice, or of a doctor's prescription like Jayne's Expecto-rant.

"So far I have sold Peerless Atlas to nine persons out of every ten that I have canvassed," says Mrs. Viola A. Siemer, Los Angeles, Cal., "and am absolutely certain I can nearly or quite maintain that rate throughout. I need 30 Atlases immediately."



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## Our Household.

### NOTES FOR HOUSEKEEPERS.

**V**EGETARIANISM, as I understand it, does not mean subsisting entirely on vegetables, but abstaining from flesh foods. I have found it desirable to let my children begin life without the use of meats. When they are seven or eight years of age I have not carefully restricted their diet in this respect. But I have found that in each case abstinence for these early years establishes a fixed distaste for meats, and, in fact, for all greasy foods. The result is that all five of my children have grown up without ever having eaten a pound of flesh. This was not because I had a fad or was a vegetarian. It came about incidentally as an experiment. They are solid-fleshed, have excellent digestion, freedom from dyspepsia and headaches, and their general wholesomeness convinces me that I made no mistake.

The use of vegetables, as generally cooked, I consider positively objectionable. The difference between a really good potato and the potato as we often have it laid upon our plates is one of art. There is a fine art in cooking vegetables more truly than in any other department of cooking. I am convinced that many families never tasted a thoroughly well-cooked potato. And this may be said of almost all the rest of the vegetables. To my taste, one of the chief charms of country life is that we may have in our gardens the choicest varieties of peas, beans and other esculents, which in the city can only be had without inquiring into the specific variety.

Housekeepers should make it a point in canning, or otherwise preserving small fruits, to remove as far as possible the bulk of the seeds. A part of my family find it impossible to use canned raspberries because of the mischief wrought by the seeds in the process of digestion. I have several friends who have great mischief wrought by eating strawberries, even when fresh from the vines. Of course, the simplest way is to turn these fruits into jellies. I recommend a marmalade, made by squeezing the berries through cheese-cloth. Certainly I would not set before my family very frequently raspberries or currants in the winter from which the seeds have not been removed.

A good many old notions, coming from no one knows where, float down in household tradition. Among these is the very erroneous saying that "currants will not make jelly after July 15th." In fact, it is a mistake altogether to suppose that currants will make jelly any more readily when partly ripe than when very ripe. I frequently make my jelly in August, and from the very latest currants of the crop. Never have I had a single failure in securing good, solid and well-colored jelly. If color is an object I should select white currants, with a proportion of about one third red. Yet it is a fact that pure white currants will make a bright red jelly, provided you scald them before pressing out the juice. The color is lighter than that which comes from red currants, but it is decided and very beautiful.

I do not understand why farmers' wives do not put up more fruit for winter use. It should not come onto the table as a rare luxury, but there should be a supply for every day during the entire winter. Those who will adopt this method of eating less greasy food and more fruit will find their families free from those ills which are ranked as troubles of the blood. These arise from overheating the system with stimulating food. However, it is not surprising that few families are well supplied with fruit in the winter, when we consider that their gardens have in them neither raspberries, blackberries nor strawberries for summer. I should not know what to do with a family where small fruits were not grown in abundance.

I have often been asked which one of all the raspberries I considered best for canning. I do not hesitate to say that, all in all, Shaffer's Colossal stands supreme. The new Columbian has many advantages, because of its dryness and its size, but the Shaffer is a better berry in quality and holds its form as well as any good berry can do it. It also has the advantage of being less seedy than any other of the established raspberries. The Golden Queen has a flavor entirely its own, and to many most delicious, but it does not hold its form at all. Cuthbert is about medium as a berry for canning. I do not like the flavor. There is more difference in the

quality of the blackcaps for preserving than is generally estimated. I should select those which are the softest, and in that respect the least adapted for market. The Davidson's Thornless is one of the best, where it can be obtained.

A dinner-table is greatly added to by the beauty of its arrangements. If you want your currants and berries to appear in the most delightful and attractive form, mix a large dish of red and white currants, or of yellow and red raspberries. The Golden Queen and the Cuthbert blend their colors most charmingly.   
LUCY POWELL.

### THE MINISTRY OF NATURE.

How often we hear the questions: Do you love flowers? Do you love birds? And as often the response is affirmatively given. This is expected. But there is love and love! One is only admiration, a pleasure to the eye, but the other is a deeper feeling—the soul is stirred, and not only the heart touched, but we receive truthful, invaluable lessons, which are prized and are a profit to us. The ministry of flowers contains a book full of valuable lessons. The subject enlarges as you look into it, and you long for an opportunity to develop it.

The thought just now is the birds' lessons, which are manifold. It is a dull, cloudy day in August. It is hot and damp. We wonder if we can bear a repetition of the heat of yesterday, with its weariness. A warbler from the wood near by starts up a happy song, a low trill. Listen! he is speaking to you. Why should we not gladly bear what our Father sends to us? He gives only what is best for us. We are his children. Both by creation and redemption we are his. Purchased at such cost, we are very dear to him. He wants to make us happy. He will withhold nothing from us which is so easy to give and so pleasant for us to have. But we are only a portion of his creatures, and all are to be provided for. The little bird cannot reason as we do, but his experience is that his creator cares and provides for him. Warbling a gleeful song in the rain, he speaks a lesson to our disconcerted and grumbling natures.

Let us consider his ways and receive useful teaching. He works his way through his little life uncomplainingly. His food is to be sought, little ones are to be fed, and morning by morning he has "scant picking," but "that only makes it sweet." His nest-building is a marvel, and the little eggs are laid with patient care and defended by his eager, quick eyes from ravages by his enemies—other birds, snakes, boys, cats and other animals. When the nest is full of little ones the parent-work is faithfully attended to. First father and then mother bird goes for food. They are not left alone while they are so young. As soon as one approaches the nest there is a little cry of welcome, and the mouths open wide to receive the food brought to them. There is again no complaint, no fear that the food will give out or cannot be found. Theirs is a life of trust. They cannot reason as we do, but they have felt a care and protection—in that they go on. Here is the birds' ministry to us. Trust—we can reason—the Word has promised us all we need, and yet how timid, distrustful and complaining we are. Let us add this to our Father's counsels—consider the birds! How much we might learn. They obey his will, taught them in the wonderful instinct which he has given. No wonder that we say "happy as a bird." How we enjoy their songs, even in the rain. Let their ministry not be lost on us. The study of bird-life is not only pleasant, but very instructive, and can be most useful. Their early morning song is inspiring and very worthy of imitation; their evening song of loving gratitude.

We hear many anecdotes of their ways and habits. One which interested me would be new to you, because never yet in print and given me by one who saw it. A bird lover who had just taken a country home saw bluebirds and wrens in abundance. At once he had boxes arranged for their nests—small and large, to suit their needs. A pair of wrens chose a bluebird's box and at once began building. When nearly completed Mr. and Mrs. Bluebird forcibly took possession when the little ones were away seeking more material. They seemed to be spreading the nest out to make it comfortable for themselves, when suddenly the owners appeared, and with loud protestations begged to have their rights respected. They withdrew to a tree near by and had a conference. Quietly waiting until it appeared



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that the bluebirds felt sure of their possession, they left together, both little wrens entered, and began at once to act on the defensive. They took the material and piled it up against the entrance-way, leaving a little hole just large enough for their tiny bodies to enter. They had scarcely finished when Mr. and Mrs. Bluebird returned. Then their scolding began. Again and again they attacked the fortification. The work was so well done they were forced to yield to superior wisdom, and at last withdrew, like the Spaniards, fairly discomfited, and the happy little wrens, singing a song of triumph, retained their home. One sat on the perch outside shaking and fluttering his little wings, while the echo came from the inside. They were good friends after this, and exchanged courtesies in many bird ways.   
HOPE HOLIDAY.

### TRAINING OUR DAUGHTERS FOR HOUSEKEEPERS.

In this respect we may well go back to the good old days of our grandmothers, when it was considered almost a disgrace for a daughter to set up a new home without being familiar with all the ins and outs of housekeeping.

The mothers of the large families of those days must have been exceedingly busy women, but with all their work and cares they found time to instruct the daughters in the cooking of good, wholesome food, caring for the sick and making and keeping in order the clothing for the family. They understood all the details of good housekeeping.

The times have changed, and though all the modern conveniences for housework have made it much easier to do the same amount of labor, yet the mothers work as hard as ever, while the daughters seem to have no taste or inclination for such homely duties. They have so many studies and work so hard at school that mother has no heart to demand from them any exertion further than arranging the multitude of decorations in the parlor, or making once in awhile a chocolate or angel cake. It spoils their hands to wash dishes; they can't sweep a floor clean, and don't know any more about getting a dinner than their brothers would.

I know one hard-working woman with two daughters who gave the excuse for not teaching her girls housework that she always had to work so hard herself she

wished them to have an easier time. Oh, doting mother, wishing for your darlings a happy, care-free girlhood, could you not see how you were laying up trouble for them in future years, when they should go to homes of their own with no preparation for the duties of home-making? The youngest married the son of a widower who had been for some time his own housekeeper. He gave the young couple a home with him, but think of his disappointment and disgust when he found his new daughter knew almost as little of housekeeping as did his pet kitten. She could, it is true, make lovely angel-cake, but when a young girl friend soon paid her a visit, and there happened to be no bread in the house, the father was obliged to leave his work and make biscuits for them. I have often wondered if she took a lesson therefrom for future necessities. No mortal man could long subsist on angel-food alone, and be the parlor ever so beautifully decorated, there must be bedroom, kitchen and pantry, and all these demand labor and care and knowledge as well.

I have heard mothers say it was more work to teach a girl how to do things properly than to do it one's self, so make that an excuse for not teaching them to sew. I know a woman, a good cook and seamstress, who married quite young and went to live with her husband's mother. She knew nothing about housework, and could not even do plain sewing, because her mother would not take the trouble to teach her; but she had sense and tact and a patient mother-in-law, and, I venture to say, her own daughter, if ever she goes to a home of her own, will go better equipped for the duties of life than did her mother when she commenced housekeeping for herself. It is mistaken kindness to let a daughter grow up care-free and inexperienced in the very things she must inevitably suffer for not knowing. Even should she marry a rich man able to afford her servants she will be much happier if she knows how to direct them. Though I am far from a model housekeeper, I am thankful that my good mother took so much interest in teaching her girls the various duties that go toward home-making. I think she was never happier than when in the midst of her family of daughters, teaching them something that would be useful to them when they grew to womanhood.

Mothers, make your daughters your companions in your working as well as leisure hours. Teach them to be self-helpful, and they will know how to help others, and in this way lay for them a sure foundation for future happiness.

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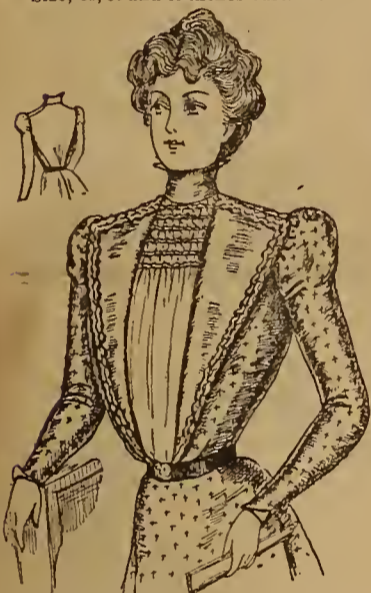
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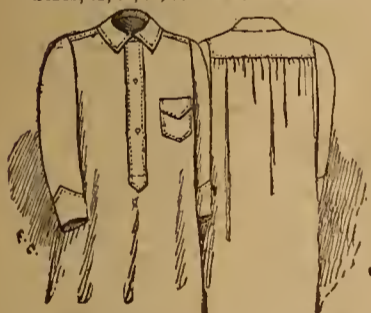
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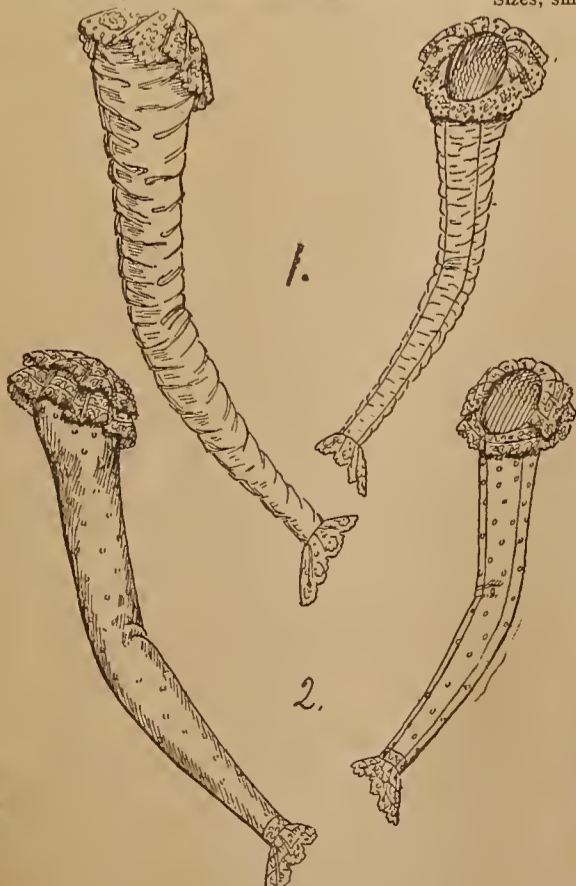
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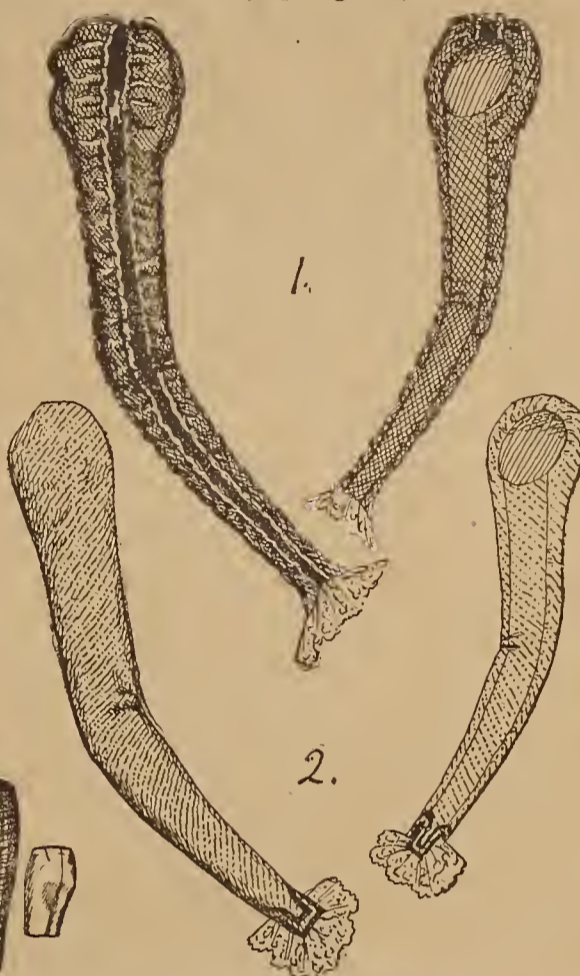
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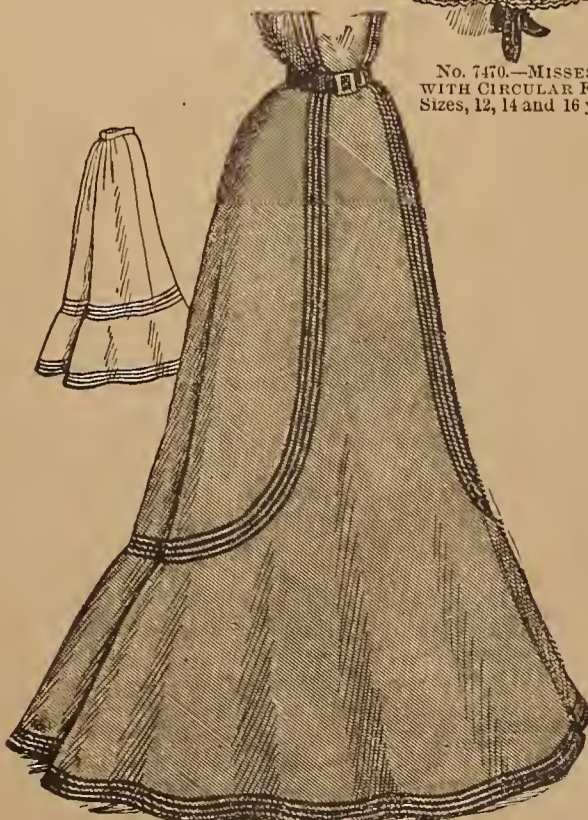
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Our Sunday Afternoon.

THE ETERNAL WILL.

There is no thing we cannot overcome;  
Say not thy evil instinct is inherited.  
Or that some trait inborn makes thy whole life forlorn,  
And calls down punishment that is not merited.

Back of thy parents and grandparents lies  
The great eternal will! That, too, is thine  
Inheritance—strong, beautiful, divine;  
Sure lever of success for one who tries.

Pry up thy fault with this great lever—Will.  
However deeply bedded in propensity,  
However firmly set, I tell you firmer yet  
Is that vast power that comes from truth's immensity.

Thou art a part of that strange world, I say;  
Its forces lie within thee, stronger far  
Than all thy mortal sins and frailties are.  
Believe thyself divine, and watch and pray.

There is no noble height thou canst not climb;  
All triumphs may be thine in Time's futurity;  
If whatsoever thy fault, thou dost not faint or halt,  
But lean upon the staff of God's security.

Earth has no claim the soul cannot contest—  
Know thyself part of the supernal source,  
And naught can stand before thy spirit's force.

The soul's divine inheritance is best.  
—Ella Wheeler Wilcox.

HUSBANDS AND WIVES.

IT LIES very much with the wives to make it easy for their husbands to show their tenderness. A woman should have a clean face to start with. A little extra scrubbing with soap and water before the husband comes home at night would not be amiss in some cases that I have observed, and it might bring some roses to the cheeks. A bow in the hair, a clean frill around the neck, perhaps a flower in the dress, has the desired effect. I tell the women that men's affections will sometimes wander because their wives are untidy and slatternly, their hair unkempt, their appearance unattractive. All women are not equally pretty; but it is not prettiness that holds a man's affection, but sweetness, neatness, nattiness, and these are possible to all women. A woman makes a profound mistake who frets and pouts and puts herself into a bad temper that she may be petted into a good one. It is a bad policy. A man will be tempted to coax her back once or twice, but he loses his respect for her each time. It really alienates him in his deepest nature and brings division between them. She is no longer his equal, one with him in spirit, heart and life, but his toy and plaything. After awhile he will live in perpetual fear that one of these fits of caprice may be coming on, will hide anything likely to induce them, and so begins a course of insincerity which is the grave of love.

No; when a woman perceives the expression of tenderness waning let her keep her secret. Like Enid, she must possess herself in patience, never altering her own behavior, never less but more sensitive to every spoken and unspoken wish; light, gentle, sympathetic, patient, expressing her tenderness by those little arts that women learn without going to school, and the love will emerge from its winter and sow the soul again with flowerets.

But let men be more thoughtful and tender. When they feel most put out and irritated, either with or without cause, it would be well to force themselves to bridge the yawning chasm with a caress. Kiss and be friends, they used to say when we were children. Let us be careful to maintain the outward forms, and the inner spirit will not be far away. We should not be less courteous to our wives than to our friends. A wife's feelings are more susceptible. To leave the house for our daily work or to return to it after hours of absence without some recognition is a mistake and worse. Let us not forget the fret and worry, the perpetual burden of the children at home, the scheming and planning, the daily provision of dinner, the letting out of frocks for growing children, the darning and patching of boys' clothes, and tidying and cleaning and washing; and if there are servants, the even greater anxiety involved in managing these. No woman would do for pay what thousands are doing for love. They ask no other wage than tenderness, which is the expression of a true and honest affection. And a woman can tell in an instant if it is that or a mere subterfuge for fidelity.—The Watchman.

POWER OF THE FIFTY-FIRST PSALM.

It is impossible to comprehend the power of the fifty-first psalm upon the race. Kings, scholars and cottagers have read it with the same spiritual profit. It was the death song of the French Protestants in the times that for cruelty have had few equals. It was sung by George Wishart, when taken prisoner before his martyrdom at St. Andrews. Its opening verse was the dying cry of the Scottish martyr, Thomas Forret, whose grave was green a quarter of a century before Scotland became free from ecclesiastical tyranny. Its cry for mercy was repeated by Lady Jane Grey upon the fateful day of her own and her husband's death. Its burning words broke from the lips of John Huss at the place of his execution near Constance. John Rogers repeated its confessions and triumphant paeans on his way to the fires of Smithfield. The words of the Hebrew psalmist were spoken by Sir Thomas More—"who was famous through Europe for eloquence and wisdom"—as he laid his head upon the block. Its seventeenth verse, written by St. Augustine upon the wall of his sick-chamber, did not make the text any the less real to the great German reformer. The seventh verse of this same psalm was found on a tablet of copper amid the eternal snows on the highest point of the earth's surface, near Cape Beechy—"Wash me, and I shall be whiter than snow."—Last Days.

TAKE CARE OF THE FEET.

Edward Hitchcock says of the foot: "Probably no organ of the body has been more abused by the fashion of its dress than has the foot. From time immemorial, and by almost the entire human race, it has been squeezed into an unyielding case of hard leather, never so large as the foot itself when resting on the ground, and with a high appendage called the heel, whence have come corns, bunions, et id genus omne of accessories of civilization."

If, in spite of the truth of the above statement, the foot still renders us excellent service, what might it not do if from the first it had received humane treatment? Even now, without flying in the face of fashion as regards the style of shoes and slippers, we may do much to mitigate the tortures of this very necessary adjunct to the human anatomy.

Nearly every one despises his feet, probably because they are undeniably ugly. But may it not be true that they would not be so ugly were they not despised? That the foot of a little child is a thing of beauty is acknowledged by all. The mother caresses it tenderly, carefully trims the tiny nails on the shapely toes, and gazes proudly at the arched instep and the pink sole. For the first two or three years of baby's life his feet receive almost as much care as do his chubby hands. The daily washing, nail-cleaning and powdering are never omitted. Then as babyhood passes, and work is demanded of these hitherto petted darlings, they gradually are neglected, until by the time their owner is ten years of age the mother takes it as a matter of course that her child should complain of corns, callosities, and even of an ingrowing nail. What else can one expect of feet? Horrid things!—Harper's Bazar.

THE CHRISTIAN'S "INDIAN SUMMER."

Quite too often is old age represented under the dreary similitude of winter, with its bitter biting winds whistling through leafless boughs, and its frozen clods ringing like iron beneath our feet. In our American climate there is a more genial season, that bears the picturesque name of Indian summer, when nature puts on a sweet smile before the wintry frosts set in, and the lingering foliage is clad in crimson and gold. A Christian life has its bright Indian summer also. The harvest of good deeds—from good seeds sown in early youth—is being garnered. Graces adorn the veteran believer, and beautify him like the scarlet glories of an autumn forest. Like shocks of corn ripened in sunshine and shower are those servants and handmaids of the Lord who still "bring forth fruit in old age" that is savory to the taste. Whatsoever may be said of the longevity of the mental powers, some of the most beautiful Christians I know of are in the genial Indian summer of three score and ten. Their orchards are still as fruitful as the orchards of Benish, and yield their fruits every month. They are always abounding in the work of their Master.—Rev. Dr. T. L. Chyler.

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## Smiles.

## SIGNS OF FALL TIME.

Gittin' close to fall time—know it by the way  
The wind comes crost the mountains at the  
breakin' o' the day;  
An' the twitchin' in my j'int's is a most un-  
failin' sign  
That they're tunin' up the fiddle fer the boys  
ter fall in line.

Gittin' close to fall time—know it by the way  
The smoke is curlin' up'ards in the mornin's  
cool and gray;  
You kin hear a whip a-crackin' 'crost a clover-  
field or two,  
An' you think o' rides by moonlight with a  
sweetheart close to you!

Gittin' close to fall time—let it come along!  
Spring is rich an' rosy, an' summer's sweet  
with song;  
Every season's good enough—hut give me  
frost an' fall,  
An' balance ter yer pardners, an' kiss yer  
sweethearts all!

—Frank L. Stanton, in Atlanta Constitution.

The man that hails you Tom or Jack,  
And proves, by thumping on your back,  
His sense of your great merit,  
Is such a friend that one had need  
Be very much his friend indeed  
To pardon or to hear it.

—Cowper.

## A TRANSPOSITION.

**A**N American who years ago served as  
our minister to Spain was fond of  
telling the following joke upon him-  
self: Shortly after he had become set-  
tled in his new home he was bidden  
to a state ceremonial, where he was to be pre-  
sented to the king. His knowledge of lan-  
guages was limited to English and French, and  
being desirous of addressing the sovereign in  
his own tongue he took pains to "coach" for  
the occasion. Several phrases were rehearsed  
until he felt that he had mastered them. When  
the critical moment arrived he saluted the  
king with great dignity, spoke a few words in  
Spanish, and passed on.

"What did you say?" asked an English  
gentleman.

"I spoke in Spanish," was the rejoinder. "I  
said, 'I cast myself at your feet,' which I am  
told is the most respectful form of salutation."  
"Ah, no," corrected a Spaniard, who had  
been observed to smile at the ambassador's  
greeting. "You are mistaken. You trans-  
posed your words and quite altered the mean-  
ing."

"What did I say?" asked the diplomat.

With a twinkle in his eye the Spaniard  
made answer, "What you really said was, 'I  
throw my heels at your head.'"

But the king had not betrayed by so much  
as the fluttering of an eyelid that anything  
unusual had occurred.—Harper's Magazine.

## HYPODERMIC ENERGY.

A physician and his friend were standing on  
the street corner of a Virginia town where  
they were spending a few days. Their at-  
tention was amusingly arrested by the sight  
of an old darky belaboring the flanks of a  
mule in a vain persuasion to make him move  
on. At last the doctor was appealed to.

"Say, boss, I'll give you five dollars ef you'll  
make dis hyer mule go."

With a sly wink the physician opened his  
case and took out his hypodermic syringe,  
filled the needle with an acid and sent it into  
the hind quarters of the mule. The effect was  
magical. With a wild plunge the mule went  
tearing down the street with the darky after  
him, the bystanders roaring with laughter. A  
short time afterward the darky, dust-covered  
and panting, approached again.

"Say, boss—how much—was de wuff—of dat  
stuff—yo' done squit—in dat mule?"

"Oh," said the doctor, "about ten cents."

Down went the darky's hands in his pants-  
pockets. He fished out two dimes. "Hyah,  
boss—am twenty cents. I wish—yo' would  
squit—twice as much of dat stuff into me—  
'case I'se bound to catch dat mule."—Short  
Stories.

## THE DOCTOR WAS OUT.

A doctor perpetrated a witticism at his own  
expense late one night last week. He had lost  
his latch-key, the door was locked, he was  
cold from a long ride, and the more he clanged  
the door-bell the more the suspicion grew in  
his mind that somebody had chloroformed the  
household.

But his sister had been aroused by the bell.  
"Some one to see the doctor and he's out,  
and I shall have to answer the bell or they'll  
ring all night," she said to herself, and hur-  
ried down to the door clad in light attire and  
sleepy patience.

Opening the door a little, not far enough to  
present her dishabille to any intruding eye,  
she shouted into the frosty air:

"The doctor's out!" and closed the door  
with the quickness of a camera slide.

"Yes, I know he's out," screamed the irate  
M.D., "and he wants to get in."

## WHAT PAUL SAID.

Guests had arrived unexpectedly at the  
country parsonage on Sunday morning. The  
weekly supply of butter had run short, so the  
hospitable host dispatched old Joe, the col-  
ored man, to his neighbor, Mr. Paul, whose  
dairy always boasted a surplus. The par-  
son proceeded to church with his well-pre-  
pared sermon on some of the best sayings of  
the great apostle, and was well under way  
with it when old Joe, returning empty-handed,  
concluded he would quietly slip in and hear  
his master preach. Just as he entered the  
preacher stretched forth his hand in a most  
impressive interrogation of voice and man-  
ner, and called out, "And what did Paul say?"  
Distinctly sounded through the church old  
Joe's reply, "He say, marster, he ain't goin' to  
let you have no more butter till you pay for  
dat last you got."—Short Stories.

## TOO POLITE.

"Beg pardon," said a polite stranger, think-  
ing he had grazed an old man's ankle.

"Eh?" said the old gentleman.

"I beg your pardon," said the polite stranger,

shouting.

Old gentleman (unconscious of any hurt)

—Why?"

Polite stranger—"I'm afraid I kicked you."

Old gentleman—"Eh?"

Polite stranger (shouting)—"I kicked you."

Old gentleman (surprised)—"What for?"

Polite stranger—"It was quite an accident."

Old gentleman (not catching it)—"Eh?"

Polite stranger (screaming in his ear)—"Ac-  
cident."

Old gentleman (terrified)—"Where? Where?"

You don't say so? Any one killed?"

(Polite stranger rushes off and misses his  
train.)—Tid-bits.

## THE CREED OF GOSSIPS.

We believe in learning everything had  
about men and women that we can learn.

We believe in repeating every story about  
men and women that we hear, without caring  
whether it be true or false.

We believe in adding to what is told to us,  
to make the story more entertaining.

We believe in denying that we ever said a  
word about a person's character when we are  
charged with so doing.

We believe in making up stories about  
people when we cannot hear anything had  
about them.

We believe in slandering everybody we do  
not like.

We believe in gossiping, in talking about  
our neighbors, and in filling the world with  
misery and trouble.—Boston Investigator.

## BEAUTY'S DISTRESS-SIGNAL.

An extremely pretty girl rode to the Capitol  
in an electric car the other day. She was  
tailor-made and trim as a cruiser, and tucked  
in the front of her jacket was a silk flag about  
the size of a handkerchief. Something about  
the flag appeared to distress an elderly man  
who sat opposite her. He fidgeted about and  
he frowned. At last, when she left the car, he  
approached her and spoke:

"Pardon me," said he, "but won't you please  
change that flag? You're wearing it upside  
down, and that is a signal of distress."—Wash-  
ington Post.

## A DOUBLE DOSE.

The youngster was about to get a thrashing  
from his father for fighting.

"Papa," sobbed the child, "you think it is  
fair fer a fellow to git two lickin's fer fight-  
in'?"

"Of course not; I'm not going to give you  
two whippings."

"No, but you're goin' to give me one, and I  
got one already from the hoy I was fightin'."

## BRIGHT BITS.

Willie—"What do they make talking-  
machines of?"

His father—"The first was made out of a rib,  
my son."—Life.

Bridget (watching her mistress as she packs  
a missionary barrel)—"An' shure, mum, yez  
musht put in th' hammer, so they'll hov some-  
thin' t' open it wit'."

Mr. Cawker—"How do you know that it is a  
secret?"

Mrs. Cawker—"How do I know? Why, ev-  
erybody knows it is a secret."—Detroit Free  
Press.

"What is your idea of a political econ-  
omist?"

"Well," replied Senator Sorghum, re-  
flectively, "there's lots o' different kinds.  
But my idea of the genuine article is the man  
who manages to put by enough while he has  
an office to pay the expenses of gettin' it for  
another term."—Washington Star.

## DRUNKENNESS IS A DISEASE.

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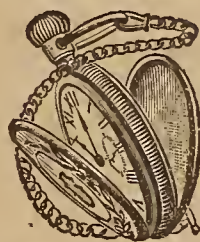
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CHILDREN'S MONEY SENSE.

FIVE years ago we were boarding, and my children were a nine-year-old boy and an eleven-year-old girl. They had no idea of the money value of anything except candy, nuts, cakes, etc. I thought it would be well to give them a practical education in this line, and one day told them that I would in the future pay them regular wages of six dollars a week; from this they should pay their table-board—four dollars and fifty cents a week—and with the balance they would have to pay for all their clothes, etc. We started at Christmas, and each put down in a little book, under the headings "money received" and "money spent," the details of the accounts. Occasionally I would borrow from them a dollar or two for a week, giving my note, and paying the exorbitant interest of five per cent a week for it. Receipts were given by the children, and demanded by them for money paid out, unless there was a sales ticket to file. An extra stock of clothes made it necessary for them to borrow at times, and then they gave their notes, as I had done. My boy, when less than ten years old, came to me one night with, "Papa, how much money do you think I've spent this year?" (He had just bought a suit and overcoat, and had little left.) I answered, "I don't know; how much?" "I've had a hundred and ninety dollars, and it's all gone but two dollars and twenty-three cents. It costs money, papa, to live; don't it?" His sister, a quiet child, learned the same lesson. We would often discuss their expenditures, and they learned the value of clothes, etc., better than they could have done in any other way. Their mama, of course, "shopped" for them, but they were always consulted or advised.

I simply told them that a certain percentage of the family money was theirs, paid to them as wages. Often, however, I gave them an opportunity to do work for me, such as writing out an article I wanted copied, or going on an unusually long errand, for which I paid car-fare, which they would save by walking. The work done for me was planned so it would have to be done during their usual play-hours, so they would learn the difference between work and play.

Neither of the children are stingy, but both know how to spend money to get the most good out of it, and both have money loaned at interest. They will walk and give the car-fare to a needy person, or give up some longed-for pleasure to aid one in distress. In order to learn the lesson properly the saving should be a voluntary act on the part of the child.—Child Study Monthly.

CASTILIAN CUISINE.

The commercial exodus to Cuba is apt to result in familiarizing Americans with bona fide Spanish cooking, something seldom seen in this country. Oil and pepper are the two things that especially characterize the Castilian cuisine. One of the favorite dishes in Cuba is "tasajo," which is simply dried meat cooked with tomatoes, red peppers and onions. "Tripa a la Audaluza" is another preparation frequently seen. As the name indicates, the basis is hoiled tripe, which is cooked with beans and potatoes, and always served with the small red Spanish sausage, known as "butafarra Catalina." A similar sausage, only black, is known as "butafarra Astoriana." "Chile con carne," which everybody eats, is nothing more than a thick stew of beef (carne) and beans seasoned with chilies. Spanish "tortillas" are corn-cakes flavored with red peppers, and differ from the Mexican tortilla in that the latter, when properly made, are rolled in chopped vegetables. A salad, a la Espanola, is prepared of lettuce and celery, with a few sliced tomatoes and peppers. Served with French dressing it is very good. The Spanish soups are as a rule a little too heavy for the American taste, which runs more toward the consommé. They are thick decoctions, full of vegetables, and look frightfully greasy. Soup, however, does not have the important role among the Spaniards that it plays in French domestic economy, and is an article of secondary importance. The dishes named are pretty apt to appear ere long on home menus, and it is interesting to know in advance what they are composed of.—New Orleans Times Democrat.

A PIGMY LOCOMOTIVE.

What is claimed to be the smallest locomotive ever made for drawing passenger-cars has been made for the Miniature Railroad Company by Thomas E. McGarigle, of Niagara Falls. This steam railroad is to be operated at the Trans-Mississippi Exposition in Omaha, Neb., and, in all, six locomotives are to be built for the company under the present contract. It is possible they will be used for other resorts, such as Coney Island, Atlantic City, Deal Beach, Washington Heights and Niagara Falls. The space at Omaha is located on the main thoroughfare, occupying about 1,100 feet.

The height of the locomotive from the top of the stack to the rail is twenty-five inches, and the gauge is twelve and one half inches. The cylinders are two by four inches. The boiler is one and one half horse-power, made

of steel, and is tested to three hundred pounds pressure, and will hold twenty-four gallons of water. It has eleven one-inch iron tubes, each two feet long. It is equipped with two injectors, and when in operation carries one hundred and twenty-five pounds of steam. The diameter of the driving wheels is ten inches. The forward truck has two wheels, which are five inches in diameter, and the tender attached has two pairs of trucks, the diameter of the wheels being five inches. The tank in the tender holds thirty gallons of water. The fire-box is ten by ten inches. The weight of this little engine is about six hundred pounds, and it will run on a rail three quarters of an inch square. Hard coal will be used as fuel. The capacity of the locomotive is ten cars, each containing two persons, or about four thousand pounds. The locomotive is equipped with sand-box, bell, etc., and has a steam brake between the drivers. One man, whose position will be on a seat in the tender, operates the engine. The scale on which the locomotive was built is about one seventh that of one of the New York Central's largest engines, and as it stands in the shop it has a very business-like appearance. The length of the locomotive from the point of pilot to end of tender is seven feet three inches.—Chicago Railway Age.

HOW TO PREVENT HOG CHOLERA.

HOG CHOLERA is caused by indigestion, and can be prevented by feeding cooked feed. We advise our readers to write the EMPIRE MFG. CO., 652 Hampshire St., Quincy, Ill., for Catalogue of FEED COOKERS. These Cookers save at least one third the feed, put stock in healthy condition, save your hogs and will more than pay for themselves in one week's use.

Recent Publications.

BOOKS RECEIVED.

FORTUNA. A story of Wall street. By James Blanchard Clews. 12 mo., 224 pages. Bound in cloth; price \$1. Published by J. S. Ogilvie Publishing Co., 57 Rose St., New York.

A MANUAL OF STANDARD TIME, and its Relations to Solar Time. By Loren C. Grieves. Published by J. H. Kidd, Ionia, Mich.

PRACTICAL POULTRY GUIDE. A concise treatise on the management of poultry for profit. By R. W. Dawson. Price, in paper, 25 cents. Published by Epitomist Publishing Co., Indianapolis, Ind.

CATALOGUES RECEIVED.

Iowa State Nursery Co., Des Moines, Iowa. Descriptive circular of the new red Wallace raspberry—a superior cross between the best red and black varieties.

Wm. H. Caldwell, Sec'y, Peterboro, N. H. Circular giving conditions of butter test of Guernsey cows for cash premiums offered by the American Guernsey Cattle Club.

Fred'k W. Kelsey, 150 Broadway, New York. Catalogue of selected trees, shrubs, bulbs and plants for autumn planting.

Chapman Manufacturing Co., West Upton, Mass. Illustrated catalogue of Chapmau's Ideal green-house and vegetable cutters.

A. B. Davis & Son, Purcellville, Va. Fall floral catalogue describing bargains in plants and bulbs.

Phoenix Nursery Company, Bloomington, Ill. Fall price-list of trees, plants, bulbs, shrubs, greenhouse and bedding plants, etc.

Edward W. Walker Carriage Co., Goshen, Ind. Illustrated catalogue of fine vehicles "from maker to user direct at wholesale prices."

Mauu Bros., Milwaukee, Wis. Circular of "cable ware"—wooden ware with hold-fast cable-hoops.

Cornell University, Ithaca, N. Y. Announcement of the New York State College of Forestry.

Sandwich Mfg Co., Sandwich, Ill. Illustrated catalogue of corn-shelling machinery, grinders, hay-loaders, hay-presses, etc.

Walter G. Pearson, Newburyport, Mass. Descriptive circular of hand-machine for mixing wet feed for poultry, cattle, horses or swine.

Peter Henderson & Co., 35 and 37 Cortlandt St., New York. Catalogue of seeds, bulbs, plants, tools, etc. Specialty—Henderson's Family Favorite strawberry.

E. R. Allen, Corning, N. Y. Descriptive circulars of Gem steel roller and Boss potato-digger.

J. H. Jones, Streator, Ill. Illustrated 116-page catalogue of Illinois incubators and brooders, forty-five pages of which are devoted to care and management of poultry.

S. F. B. Morse, of the Southern Pacific Company, New Orleans, La. Booklet—"A Matter of Health." West Texas and its relation to pulmonary complaints.

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East Indian missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 820 Powers' Block, Rochester, N. Y.

FINE SILVERWARE FREE

THIS SILVER-PLATED WARE can be used in cooking, eating and medicines the same as solid silver. Because we buy our silverware direct from the factory in enormous quantities (over 196,000 pieces last year), and sell it without profit in order to get subscriptions and clubs, is the reason why we can afford to offer such bargains. The base of this ware is solid nickel-silver metal, and being perfectly white and hard it will never change color, and will wear a lifetime. This ware will not, cannot turn brassy, corrode or rust. We absolutely guarantee that each and every piece of this ware is plated with the full STANDARD amount of pure coin-silver. In beauty and finish it is perfect.

FULL SIZE

All of the ware is full regulation size. Dessert-forks are specially designed for cutting and eating pie, and dessert-spoons are proper spoons with which to eat soup.

GUARANTEE

We guarantee every piece of this ware to be exactly as it is described and to give entire satisfaction or money refunded.

Will Stand Any Test To test this silverware use acids or a full standard amount of pure coin-silver and the base solid white metal and exactly as described in every other particular we will refund your money and make you a present of the subscription. If returned to us we will replace free of charge any piece of ware damaged in making the test.



INITIAL LETTER Each piece of this ware (except the knives) engraved free of charge with an initial letter in Old English. Only one letter on a piece. Say what initial you want.

The base of the table-knives is fine steel highly polished. They are first plated with nickel-silver, which is as hard as steel, then plated with 12 pennyweights of coin-silver. The best silver-plated knives on the market.

ARISTO SILVER POLISH

Is absolutely chemically pure—free from mercury, acid, ammonia, grit, or other injurious substance. It cleans and polishes silverware perfectly, and makes it look like new. A child can use it. Comes in quart packages—enough to last the average family for several years. Never loses its strength. Try it, and if you don't think it the best and cheapest polish you ever used or can buy anywhere else we will refund your money and let you keep the polish.

A quart package of Aristo Silver Polish sent to any address for 25 cents, or given for TWO yearly subscribers to Farm and Fireside at the Clubbing Price, 30c. each.

PREMIUM OFFERS

We will send Farm and Fireside one year and the Silverware to any one at the following prices.

The Farm and Fireside 1 year and a Set of 6 Teaspoons for the club price of	\$ .75
The Farm and Fireside 1 year and a Set of 6 Forks for the club price of	1.25
The Farm and Fireside 1 year and a Set of 6 Tablespoons for the club price of	1.25
The Farm and Fireside 1 year and a Set of 6 Knives for the club price of	1.75
The Farm and Fireside 1 year and a Set of 6 Coffee-spoons for the club price of	.75
The Farm and Fireside 1 year and a Set of 6 Dessert-spoons for the club price of	1.00
The Farm and Fireside 1 year and a Set of 6 Dessert-forks for the club price of	1.00
The Farm and Fireside 1 year and Sugar-shell and Butter-knife, both for	.50
The Farm and Fireside 1 year and Berry-spoon for the club price of	.60
The Farm and Fireside 1 year and Pie-knife for the club price of	.60
The Farm and Fireside 1 year and Gravy-ladle for the club price of	.60
The Farm and Fireside 1 year and Child's Set (Knife, Fork and Spoon) for the club price of	.60

SILVERWARE FREE

For Clubs of Subscribers to the Farm and Fireside at the Clubbing Price, 30 Cents Each.

Set of 6 Teaspoons given free for a club of four subscribers at 30c. each  
Set of 6 Forks given free for a club of seven subscribers at 30c. each  
Set of 6 Tablespoons given free for a club of seven subscribers at 30c. each  
Set of 6 Knives given free for a club of twelve subscribers at 30c. each  
Set of 6 Dessert-spoons given free for a club of five subscribers at 30c. each  
Set of 6 Dessert-forks given free for a club of five subscribers at 30c. each  
Set of 6 After-dinner Coffee-spoons given for a club of four subscribers at 30c. each  
One Berry-spoon given free for a club of three subscribers at 30c. each  
One Pie-knife given free for a club of three subscribers at 30c. each  
One Gravy-ladle given free for a club of three subscribers at 30c. each  
Both Sugar-shell and Butter-knife given free for a club of two subscribers at 30c. each  
One Child's Set (Knife, Fork and Spoon) given free for a club of three subscribers at 30c. each

NOTE.—Thirty cents is the clubbing price for yearly subscriptions to Farm and Fireside without a premium to the subscriber. But members of clubs may accept any of our premium offers at the clubbing prices, and their subscriptions can be counted in clubs. Receipts and new names, including a club-raiser's own subscription, can be counted in clubs. Positively no reduction in clubbing prices will be made.

Postage paid by us in each case.

Address FARM AND FIRESIDE, Springfield, Ohio.

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Never have we or any other publishers or book-dealers offered such a fine Bible at so low a price. By giving our order for a great quantity in time for them to be printed and bound during the dull summer months we got them at the lowest price ever known for a Bible so finely made, and now we give our subscribers and club-raisers the benefit of our bargain. Don't forget that this Bible is bound in seal-finished leather, perfectly flexible, and full leather lined, with overlapping edges, and, as will be seen by the list of 20 points of merit opposite, has every other good feature found in the most expensive Bibles. This is the latest edition of the genuine Oxford Teachers' Bible. The helps, being new and copyrighted, cannot be found in any other Bible. The edges are a rich red under pure gold-leaf. The regular retail price of this Bible is from \$3.00 to \$5.00. Satisfaction guaranteed or money refunded.

## 20 Points

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Large Type	Over 1,400 Pages
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Subject Index	30 Illustrations
Name in Gold	49 Patent Indexes

Specimen of the Type in the Bible	<i>Christ appeareth to Mary</i> sitting, the one at the head, and the other at the feet. where the body of Jē-sūs had lain. 13 And they say unto her, Woman, why weepest thou? She saith unto them, Because they have taken away my Lord, and I know not where they have laid him.	St. JOHN, 21. A.D. 33. 1 John 1.1.	<i>and to his disciples.</i> them: <i>then</i> came Jē-sūs, the doors being shut, and stood in the midst, and said, Peace be unto you. 27 Then saith he to Thōm'-ās, Reach hither thy finger, and behold my hands; and <sup>a</sup> reach hither thy hand, and thrust it into my side: and be not faithless, but believing.
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YOU CAN EXAMINE IT WITHOUT COST JUST AS IF IN A BOOK-STORE, AND THEN IF YOU WANT IT BUY IT.

We will send Farm and Fireside One Year and this fine Oxford Bible for ..... **\$2.25**

FOR 25 CENTS EXTRA (THAT IS, \$2.50) WE WILL SEND THE BIBLE WITH PATENT INDEX OF 49 INDENTED THUMB-LEATHERS.

WHEN ORDERED SENT BY MAIL the money must accompany the order; but if not perfectly satisfactory, return it to us at once and we will refund the money.  
Your name in pure gold-leaf will be stamped on the outside of the front leather binding for 25 cents extra. But in this case the money must be sent with the order, as a Bible with a name on it cannot be returned to us. Write the name very plainly.

**FREE** This Bible (without patent index) given free as a premium for a club of TWELVE yearly subscribers to Farm and Fireside at the Clubbing Price, 30 cents each.

The Bible with Patent Index Given Free for a Club of FOURTEEN.

In either case a club-raiser can have a name in gold-leaf put on one Bible free of charge by sending two additional Farm and Fireside subscribers, at 30 cents each.

POSTAGE OR EXPRESSAGE ON THE BIBLE PAID BY US.

## SIX SILVER-PLATED NUT-PICKS

In New England there is a factory which manufactures most of the nut-picks sold in America. We have contracted with them for a large number of sets of their most popular style, which is shown here. They are made of steel, handsomely turned handles and well silver-plated. Packed six in a cloth-lined box.



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**FREE**

This Set of Six Silver-plated Nut-picks Given FREE for a club of TWO yearly subscribers to the

Farm and Fireside at the Clubbing Price, 30 cents each.

We will send Farm and Fireside one year and this Set of Six Silver-plated Nut-picks to any one for the Clubbing Price, 50 cents. (Regular Price, 70 cents.)

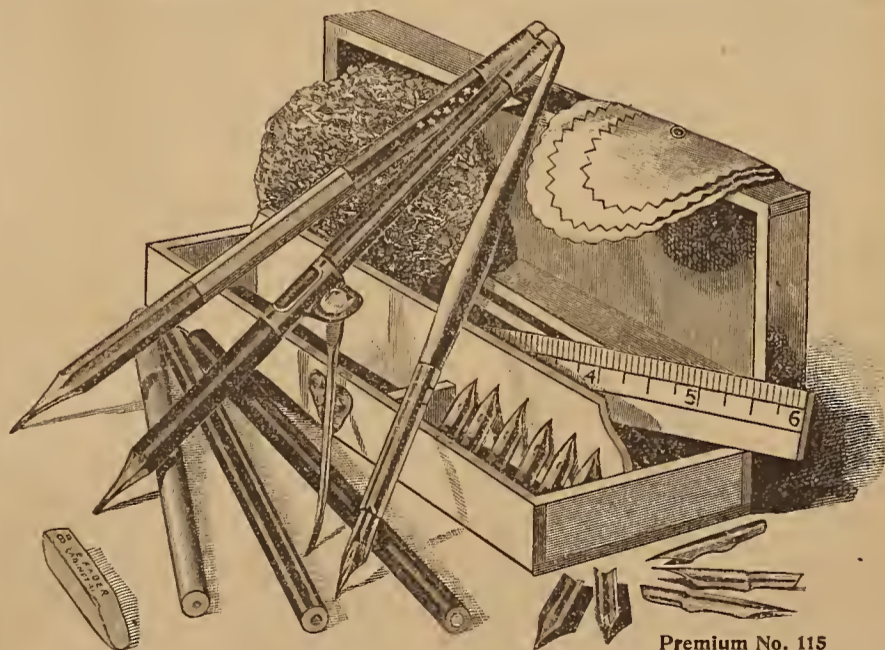


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This Scholars' Companion consists of one polished wooden box 8 inches long, 3 inches wide, 1 1/2 inches deep, with lock-corners and brass hinges and fastener, and contains all of the articles named and shown below.

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1 Polished Box	\$ .25	1 Rubber Eraser	\$ .05
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1 Pencil, Blue Lead	.10	1 Whole Sponge	.03
1 Pencil, Red Lead	.10	1 Chamois Pen-wiper	.05
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1 Pencil, Fine Black Lead	.05	1 Wood-covered Slate-pencil	.01
Total Retail Value		\$1.00	

Each Scholars' Companion contains every one of the 23 articles named and shown above. We guarantee them to be first class and worth One Dollar at retail or your money refunded.

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NOTE.—Thirty cents is the clubbing price for yearly subscriptions to Farm and Fireside without a premium to the subscriber. But members of clubs may accept any of our premium offers at the clubbing prices, and their names can be counted in clubs. RENEWALS and new names, including a club-raiser's own subscription, can be counted in clubs. Positively no reduction in clubbing prices will be made.

Postage or expressage on premiums paid by us except when otherwise specified in advertisement.

Address FARM AND FIRESIDE, Springfield, Ohio.

**SEND US ONE DOLLAR** and this ad. and we will send you this big \$25.00 COOK STOVE, by freight C.O.D., subject to examination. Examine it at your freight depot and if found perfectly satisfactory and the greatest stove bargain you ever saw or heard of, pay the freight agent our SPECIAL PRICE \$13.00 less the \$1.00 sent with order, or \$12.00 and freight charges. This stove is size No. 8, oven is 16"x18"x11, top is 24"x23", made from best pig iron, extra large flues, heavy covers, heavy linings and grates, large oven door, heavy tin-lined oven door, handsome nickel-plated ornamental and trimmings, extra large deep enameled Standish porcelain lined reservoir, handsome large ornamental base. Best coal burner made, and we furnish FREE an extra wood grate, making it a perfect wood burner. WE ISSUE A BONDING GUARANTEE with every stove and guarantee safe delivery to your railroad station. Your local dealer would charge you \$25.00 for such a stove; the freight is only about \$1.00 for each 500 miles, so we save you at least \$10.00. Address, **SEARS, ROEBUCK & CO.** (Inc), CHICAGO.



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Self-oiling, Best Governed, Acknowledged to be the most powerful and durable made. We have everything in this line. **Towers, Tanks and Pumps, Cutters, Grinders, Shelliers, etc.**

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Catalogue, full of valuable points, free.

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### IS A NECESSITY

In the practice of modern agriculture. They are needed for churning, grinding feed, cutting fodder or ensilage, separating cream, wood sawing, pumping water, and a host of other things.

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are clearly the best for the purpose. Either Upright or Horizontal; from 3 h. p. up. Safe, simple, easy to run. They are quick steamers and require little fuel. Pamphlet with prices on application, stating size power wanted.

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**WHAT**

part of a wagon wears out first? The wheels, of course. Why not buy wheels that can't wear out? When a man buys the **ELECTRIC WHEELS** he always has good wheels on his wagon. They can't rot, warp or become loose; no re-setting of tires; they fit any wagon. We also make wheels to fit anything wearing wheels. Send for circulars and prices.

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## YOUR WIFE

and family may drive out with perfect safety if your carriage or buggy is equipped with the accident preventing, life preserving, **AUTOMATIC GRIP NECK YOKE.**

### THE "GRIP" simply grips and holds 'till all danger is past. AGENTS MAKE MONEY rapidly selling them, for everybody buys them at sight. Plain un-nickelled, \$1; Nickelled Loops and Acorn Heads, \$1.50; Nickelled Tips and Centers, 1.75; Nickelled Centers and Tips without Yoke, \$1.25; Centers without Yoke, 65 cts. Made in three sizes, to fit pole tips 1 1/2 to 1 3/4. Also farm wagon size to grip pole 2 1/2 to 3 1/2 in size. Send to-day for circulars and special confidential terms to agents.

**AUTOMATIC GRIP NECK YOKE CO.,**

69 Harding Street, Indianapolis, Ind.

No matter what happens to the traces, single-tree or double-tree, the tongue can't drop and turn over the vehicle. The "GRIP" simply grips and holds 'till all danger is past. AGENTS MAKE MONEY rapidly selling them, for everybody buys them at sight. Plain un-nickelled, \$1; Nickelled Loops and Acorn Heads, \$1.50; Nickelled Tips and Centers, 1.75; Nickelled Centers and Tips without Yoke, \$1.25; Centers without Yoke, 65 cts. Made in three sizes, to fit pole tips 1 1/2 to 1 3/4. Also farm wagon size to grip pole 2 1/2 to 3 1/2 in size. Send to-day for circulars and special confidential terms to agents.

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## SCIENTIFIC GRINDING MILLS

They grind... crush the corn husk, cob and all, and grind it into meal. Saves time, labor and money. For steam power; other styles for horses. Our prices will suit you. Write for them and free catalogue.

**FOOS MFG CO-Springfield, O.**

## THE ONLY MILL

that grinds the same feed through two mills on the same spindle. Grinding pressures balance each other, avoiding wear and heating. The **QUAKER CITY** Grinding Mill

grinds corn and cob, oats, &c., for feed and Graham. Catalogue free, A. W. Straub & Co., 3137 Filbert St., Philadelphia. The A. W. Straub Co., 4 S. Canal St., Chicago. Also Western Agents for Smalley's Powers, Shelliers & Cutters.

**\$5 to \$35 OVER 50 MAKES** in America. Write for confidential offer. You can earn a wheel acting as our agent. **Brown-Lewis Cycle Co.** H. Chicago, U.S.A.

## Our Farm.

### MARKET-GARDEN NOTES.

FROM my experience in marketing fruits and vegetables grown on my truck-farm I may be able to give some points that will be of interest to your readers. In these times of intense competition it requires business ability, push and enterprise to successfully market one's produce. One may produce a first-class article, but unless he has the business knowledge to advertise it and push its sale some more enterprising man will get the start of him in supplying the market.

A few years ago when I began truck-farming I had so little competition that I could not supply the demand in the two or three villages near me. Other people found that I was making a little money, and now at times there are more fruits and vegetables offered for sale than the market will take at a price that gives the producer any profit. When there is a full market only the best grades of produce are wanted; so we may say in a word that successful marketing depends on having a prime article and in knowing how to reach the people who want. The most of my produce is sold from the market-wagon in the villages near me. As my time is worth more attending to matters at home I do not go with the market-wagon, but try to hire a man for this work who has the qualifications for a good salesman. I have found a great difference in men in their ability to approach people in a way to make sales; some men will sell twice as much as others. I want a man who is genial, polite, has a pleasing way, who is honest, a faithful worker, and quick and accurate in making change.

Another point is to have a wagon, horse and harness attractive in appearance. These help to make a better impression on the people to whom you want to sell. Other things being equal, the rich and fashionable people will buy from the market-wagon that looks nicely, and of the salesman who is well dressed and has pleasing manners.

One of my specialties is celery. The bunches are carefully assorted, and all the small and inferior bunches are put in separate baskets and sold for culls. In this way I grade all the produce, then in supplying customers my man is able to give them just what they want, and those who want a good article can always get it, and by supplying them with that which is uniform in quality I can keep their patronage. I have also learned that one needs to carry quite a variety of fruits and vegetables on his market-wagon, for it is often an accommodation to customers if they can buy all they want from one wagon. If one does not grow the article wanted in his own garden he should try to supply it in some way. During the fall, when people are making pickles and canning fruit, I have found the greatest demand for cabbage, cauliflower, onions, small cucumbers, and peaches, pears and tomatoes.

A subject to which I would call the attention of truck-farmers is utilizing the refuse that is not marketable by feeding it to some kind of live stock. I have only a little land in grass, but I am now keeping a cow that provides the family with milk and butter on refuse from the garden, by feeding a little grain with it. I feed her the sweet-corn stalks and small ears not marketable; small apples and potatoes, cabbage trimmings and barn grass, and some other weeds that I pull up when I am weeding the crops. Then it pays to keep a pig, which can be partly fed on such refuse as cabbage and cauliflower trimmings. One weed I find very troublesome is purslane; when weeding I always pull it up, put in baskets and carry it off the field, and I have found that the best way to dispose of it is to carry it to the pig, which will eat it readily. I usually grow about 40,000 bunches of celery, and in trimming it for market I have large quantities of refuse. My horse has learned to eat this, and will now eat it as readily as hay, and I carry him a large amount three times a day. He is well fed on grain and gets but little else in addition to the celery trimmings. My poultry also consumes a part of this refuse from the garden, all of which helps to make eggs, milk and meat, and the animals thus fed make a large part of the manure I use on the garden. In the great business enterprises that are the most successful all the waste material and by-products are utilized; nothing is lost. **W. H. JENKINS.**

**ARMSTRONG & McKELVY** Pittsburgh.  
**BEYMER-BAUMAN** Pittsburgh.  
**DAVIS-CHAMBERS** Pittsburgh.  
**FAHNESTOCK** Pittsburgh.  
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Made of best doubly annealed galvanized steel wire. Top and bottom wires No. 9. All other wires No. 11. We use the strongest stay wire in any woven wire fence on the market—hence more strength and durability. Our **LOOP KNOT** (entirely new feature, patented), provides perfect expansion and contraction and keeps it tight at all temperatures. Our **LOOP KNOT** being uniformly distributed throughout each foot of fence is, in effect, the same as placing one coil of a spiral spring in every foot throughout the entire length of fence. **STRENGTHENING IT.** Our Loop Knots make the fence plainly visible and impossible for any wire to slip or give. It is **Hog tight and Bull strong.** Will turn all kinds of stock without injuring them. Where we have **NO AGENTS** a **LIBERAL DISCOUNT** will be given on introductory order. Reliable farmer agents wanted in every township. Send for catalogue and prices.

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There are hundreds of sleeping rooms about the country now cold and cheerless, that might be made otherwise by the use of the **ROCHESTER RADIATOR** with its 120 cross tubes. One stove or furnace does the work of two, and you thus **SAVE 1/2 YOUR FUEL** if you don't understand it, send for free booklet. Where we have no active agent we will sell at wholesale price to introduce.

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RUNS EASY No Backache weighs only 41 lbs. EASILY CARRIED

SAWS DOWN TREES

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Grinds corn and cob and all kinds of small grain. Made in four sizes for 2, 4, 8 and 10 horse power. Send for catalogue and prices.

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just "beat all" for cutting all kinds of roots for live stock. They shake out all the dirt and leave only clean and palatable food. Don't slice or cube the roots but leave a half-round chip that can't choke anything. Four sizes, hand and power. Write for introduction price.

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VOL. XXII. NO. 3

EASTERN  
EDITION

NOVEMBER 1, 1898

Entered at the Post-office at Springfield, Ill.,  
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TERMS { 50 CENTS A YEAR  
24 NUMBERS

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Do you know that the agricultural prosperity of this country is greater than it has been for many years past?

Do you know that prosperous farmers are large buyers of all kinds of merchandise, and that they are large patrons of reliable mail-order houses?

Do you know that to get in touch with over 300,000 farmers of means you should use FARM AND FIRESIDE as an advertising medium?

Do you know that this greatest of all agricultural papers has the reputation of paying a larger profit on the cost of advertising than any other?

We shall be glad to send you booklet giving the testimony of many well-known advertisers, who are continuous patrons of FARM AND FIRESIDE—testimony of shrewd business men, who are competent to tell you where profit lies.

**AVERAGE CIRCULATION SINCE**  
**JANUARY, 1898, 325,500 PER ISSUE**

P. S.—The majority of agricultural advertisers who study the signs of the times are greatly increasing their space.

## WITH THE VANGUARD

PRESIDENT MCKINLEY, in a memorable address at the Trans-Mississippi Exposition, said:

"It has been said by some one that the normal condition of nations is war. That is not true of the United States. We never enter upon war until every effort for peace without it has been exhausted. Ours has never been a military government. Peace, with whose blessings we have been so singularly favored, is the national desire and the goal of every American aspiration.

"On the 25th of April, for the first time for more than a generation, the United States sounded the call to arms. The banners of war were unfurled; the best and bravest from every section responded; a mighty army was enrolled; the North and the South vied with each other in patriotic devotion; science was invoked to furnish its most effective weapons; factories were rushed to supply equipments; the youth and the veteran joined in freely offering their services to their country; volunteers and regulars and all the people rallied to the support of the republic. There was no break in the line, no halt in the march, no fear in the heart; no resistance to the patriotic impulse at home, no successful resistance to the patriotic spirit of the troops fighting in distant waters or on a foreign shore.

"What a wonderful experience it has been from the standpoint of patriotism and achievement! The storm broke so suddenly that it was here almost before we realized it. Our navy was too small, though forceful with its modern equipment and most fortunate in its trained officers and sailors. Our army had years ago been reduced to a peace footing. We had only 19,000 available troops when the war was declared, but the account which officers and men gave of themselves on the battle-fields has never been surpassed. The manhood was there and everywhere. American patriotism was there, and its resources were limitless.

"The courage and invincible spirit of the people proved glorious, and those who a little more than a third of a century ago were divided and at war with each other were again united under the holy standard of liberty. Patriotism banished party feeling; \$50,000,000 for the national defense was appropriated without debate or division, as a matter of course, and as only a mere indication of our mighty reserve power.

"But if this is true of the beginning of the war, what shall we say of it now, with hostilities suspended and peace near at hand, as we fervently hope? Matchless in its results! Unequaled in its completeness and the quick succession with which victory followed victory! Attained earlier than it was believed to be possible; so comprehensive in its sweep that every thoughtful man feels the weight of responsibility which has been so suddenly thrust upon us. And above all and beyond all the valor of the American army, and the bravery of the American navy, and the majesty of the American name, stand forth in unsullied glory, while the humanity of our purpose and the magnanimity of our conduct have given to war, always horrible, touches of noble generosity, Christian sympathy and charity and examples of human grandeur which can never be lost to mankind. Passion and bitterness formed no part of our impelling motive, and it is gratifying to feel that humanity triumphed at every step of the war's progress.

"The heroes of Manila and Santiago and Porto Rico have made immortal history. They are worthy successors and descendants of Washington and Greene, of Paul Jones, Decatur and Hull, and of Grant, Sherman, Sheridan and Logan, of Farragut, Porter and Cushing, and of Lee, Jackson and Longstreet.

"New names stand out on the honor-roll of the nation's greatness, and with them unnamed stand the heroes of the trenches and the fore-castle, invincible in battle and uncomplaining in death. The intelligent, loyal, indomitable soldier and sailor and marine, regular and volunteer, are entitled to equal praise as having done their whole duty, whether at home or under the baptism of foreign fire.

"Who will dim the splendor of their achievements? Who will withhold from them their well-earned distinction? Who will intrude detraction at this time to belittle the manly spirit of the American youth and impair the usefulness of the American navy? Who will embarrass the government by sowing seeds of dissatisfaction among the brave men who stand ready to serve, and die if need be, for their country? Who will darken the councils of the republic in this hour, requiring the united wisdom of all? Shall we deny to ourselves what the rest of the world so freely and so justly accords to us? The men who endured in the short but decisive struggle its hardships, its privations, whether in the field or camp, on ship or in siege, and planned and achieved its victories, will never tolerate impeachment, either direct or indirect, of those who won a peace whose great gain to civilization is yet unknown and unwritten.

"The faith of a Christian nation recognizes the hand of God in the ordeal through which we have passed. Divine favor seemed manifest everywhere. In fighting for humanity's sake we have been signally blessed. We did not seek war. To avoid it, if this could be done in justice and honor to the rights of our neighbors and ourselves, was our constant prayer.

"The war was no more invited by us than were the questions which are laid at our door by its results. Now, as then, we will do our duty. The problems will not be solved in a day. Patience will be required; patience combined with sincerity of purpose and unshaken resolution to do right, seeking only the highest good of the nation and recognizing no other obligation, pursuing no other path but that of duty.

"Right action follows right purpose. We may not at all times be able to divine the future, the way may not always seem clear, but if our aims are high and unselfish, somehow and in some way the right end will be reached.

The genius of the nation, its freedom, its wisdom, its humanity, its courage, its justice, favored by divine providence, will make it equal to every task and the master of every emergency."

In collecting information from leading business centers relating to the effect of the low price of cotton upon the interests of the South, the "New York Journal of Commerce" received letters which agree (1) that the reduced price of cotton does not imply any set-back to the general business prosperity of the South; (2) that the cost of raising the staple has been materially lessened during the years of steadily falling prices; (3) that in most sections the cost of production is only about one half what it was ten years ago; (4) that five-cent cotton will, as a rule, leave a moderate profit to the grower; (5) that the planters are steadily diminishing their dependence upon factor's advances through diversifying their crops and producing articles of food which they have been accustomed to buy at oppressive prices; (6) that owing to this diversification of crops they have diminished their local debts and acquired an independence of the factors which enables them, with economy in expenses, to effect regular savings, and (7) that the general condition of the agricultural South is such as to warrant the hope of a steady run of prosperity, in which the mercantile interest will receive its share of benefit.

"The testimony we have adduced," says the "Journal of Commerce," "reveals plainly that at least the South has come to a comprehension of the real cause of the agricultural depression under which it has so long suffered—namely, the limitation of its cultivation to one crop, with a consequent dependence upon credit for the raising of that crop. It has taken a whole generation to explode this policy, and during the interval all sorts of artificial ameliorations have been resorted to or advocated, especially that of attempted combinations to limit production. It is simply marvelous that there should have been such a long and uniform persistence in buying from other sections products of subsistence which could be easily raised by the planter himself. We do not care to inquire into the sectional idiosyncrasies which may have led the planters to submit themselves to a condition of abject peonage to usurious lenders. It is sufficient that at last they have discovered their error and found their way to self-emancipation. The first great emancipation of the South was from the fetters of slavery; the second, but little less beneficent, is from bondage to the factor. Henceforth we may look upon this group of sister states as moving side by side with the West and East under the inspiration of a policy of enterprising self-dependence; and that means a future for the South which even optimistic observers have scarcely dared to hope for."

BRADSTREET'S" October table of prices show that "compared with October 1st last year the only cereal lower in value is wheat. Most pork and dairy products are also lower, as are raw and manufactured cotton, Bessemer pig-iron and steel rails and billets, coal and coke, naval stores, tobacco and hay. Shorter yields of these cereals are reflected in advances for corn, oats, barley and rye. A number of provisions and groceries are higher, as are most raw textiles, excluding cotton, petroleum, a number of iron and steel products, building materials and a number of miscellaneous articles."

The index number showing the general level of prices of one hundred and seven important articles is higher this fall than it has been at any time since October 1, 1893. In fact, the general level of prices is steadily rising to the marks made before the panic.

A good illustration of the necessity of a public sentiment thoroughly aroused in favor of the enforcement of judicious laws is seen in the annual occurrence of destructive forest-fires in the timbered regions of the Northwest. Stringent fire laws have been enacted, and there are live state forestry organizations, but forest-fires as devastating as ever occur whenever droughts prepare the material. For destructiveness the fires of the past summer rank with the notable ones of former years.

## FARM AND FIRESIDE

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The above rates include the payment of postage by us. All subscriptions commence with the issue on press when order is received.

Subscribers receive this paper twice a month, which is twice as often as most other farm and family journals are issued.

**Payment**, when sent by mail, should be made in Express or Post-office Money-orders, Bank Checks or Drafts. WHEN NEITHER OF THESE CAN BE PROCURED, send the money in a registered letter. All postmasters are required to register letters whenever requested to do so. DO NOT SEND CHECKS ON BANKS IN SMALL TOWNS.

**Silver**, when sent through the mail, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelop and get lost.

**Postage-stamps** will be received in payment for subscriptions in sums less than one dollar, if for every 25 cents in stamps you add one-cent stamp extra, because we must sell postage-stamps at a loss.

**The date** on the "yellow label" shows the time to which each subscriber has paid. Thus: nov98, means that the subscription is paid up to November, 1898; dec98, to December, 1898, and so on.

**When money is received**, the date will be changed within four weeks, which will answer for a receipt.

**When renewing your subscription**, do not fail to say it is a renewal. If all our subscribers will do this, a great deal of trouble will be avoided. Also give your name and initials just as not on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on the label, to your letter of renewal. Always name your post-office.

## The Advertisers in This Paper

We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties; if subscribers find any of them to be otherwise we should be glad to know it. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.



## ABOUT RURAL AFFAIRS

**Bees and Fruits** The fact is undeniable that insects are freely employed by nature for conveying the pollen from one blossom to another, and thus helping to "make fruit set," that is, grow and produce seed. In the greenhouse, without the aid of insects and without artificial precautions in bringing ripe pollen in contact with the pistils of the blossoms, we often grow tomatoes, but these are small, solid and without seeds. Here, of course, the trouble may be more in the failure of the pollen to mature properly in the damp atmosphere of the greenhouse and in the absence of much sunlight than in the absence of insects. Another fact is that bees belong to the insects which carry pollen from flower to flower, and if one doubts it he has only to watch the bees on bright days in April and May as they swarm about the cherry, apple and other fruit-trees then in full bloom. Sometimes we have imagined that where we find large orchards and only few colonies of bees there would not be bees enough to carry out nature's design in this respect, and frequently we have blamed the scarcity of bees or inclement weather which kept the bees in their hives for the failure of fruit crops. In one of my exchanges I recently found the following instance, told of Lord Sudeley's fruit-plantation in Gloucestershire, England. About two hundred acres of fruit-trees were first planted, and for some years there was such poor success that it was a question whether the enterprise should not be abandoned. Lord Sudeley was, however, advised to introduce bees, as it was found that not many were kept in that district. Two hundred colonies in charge of a practical bee-keeper were introduced, and the result was magical. Thenceforward the trees bore fruit profusely, and the former failure was turned into a success. Since then five hundred acres have been planted with fruit-trees, and a large jam-factory has been started close by, both undertakings being in a prosperous condition.

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It seems plain enough that bees have a mission, and that they are very useful

little beings. As roses have their thorns, so they have their sting, and sometimes will make it warm for the owner or his neighbors. Often they are accused of attacking grapes, peaches and other fruits, and they will eat of such fruits when the skin on them is once broken. But while their good services are recognized, and should be appreciated, there can be no sense in fighting bees and bee-keepers by those who imagine they suffer slight losses from bee depredations, or occasionally a little annoyance by a bee-sting. Bees are here to help the farmer, not to hurt him. The help is spontaneous and continuous; the hurt is accidental and exceptional. It must be said, however, that the unfruitfulness of large orchards is not always due to the absence of bees. In our anxiety to find reasons for certain facts we are often like the cheese-mites in the following parable (found in a recent issue of a Buffalo daily paper):

"The cheese-mites asked how the cheese got there,  
And warmly debated the matter;  
The orthodox said that it came from the air,  
And the heretics said from the platter.

They argued it long and they argued it strong,  
And I hear they are arguing it now;  
But of all the choice spirits who lived in the cheese

Not one of them thought of a cow.

—Conan Doyle."

This parable reminds me strongly of many discussions I have listened to about bacilli, and bacteria, and the diseases produced by them in animals and plants, and about the best methods of treating them, etc. We may be right in our conclusions, and then again we may be far from the truth. The trouble is that our horizon is about as limited as that of the cheese-mites.

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Instances have been recorded of large orchards all of one variety (Bartlett pears in one case) remaining barren until other varieties were planted in, and the investigating scientists have finally decided that there are fruits the pollen of which is impotent on its own pistils, so that they will refuse to set and mature fruit if standing alone, but will be liable to bear good crops as soon as pollen is provided from other varieties or species. In mixed plantings, therefore, the bees may be expected to assist in making the blossoms "set" fruit, while in plantings of one kind of fruit only they might be powerless to do any good. Some time ago I requested my readers to report their observations on this question of bees and fruit. Thus far there has been no response. What we want to know especially is whether the trees in the vicinity of large bee-stands have set fruit more fully than trees in a vicinity having few or no bees. Let me hear from you on this point, friends.

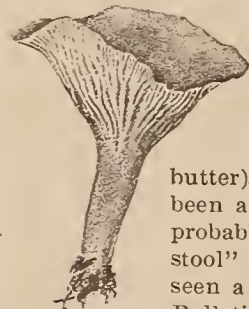
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**Edible and Poisonous Fungi** To the Department of Agriculture and to the information which it has given me by its bulletins I am indebted for the enjoyment of some very palatable dishes, lately. I have had puff-balls repeatedly on my table, both fried and in stews, and I find them excellent. They grew on the lawn, and in former years the boys just used to play foot-ball with them. Yesterday I also

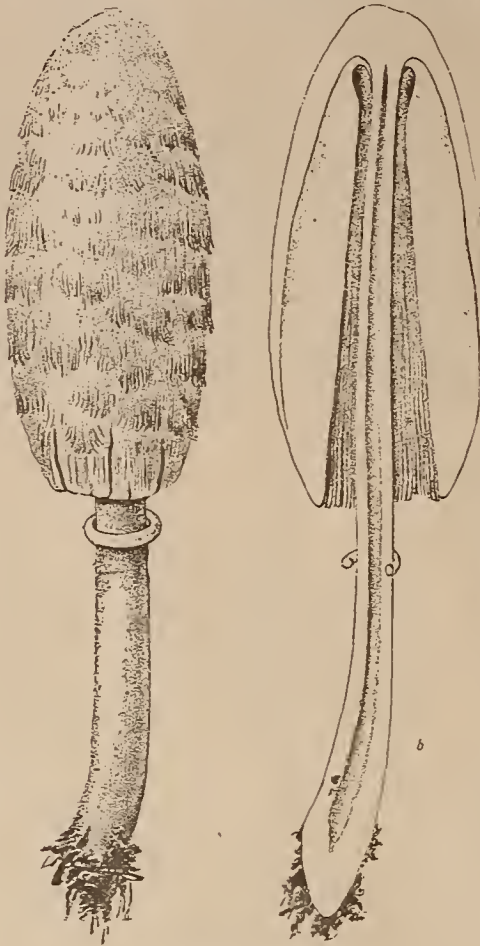
found a lot of horsetail, or maned, agaric (Coprinus comatus) by the roadside, and they gave an excellent dish (fried in butter). I would surely have been afraid to eat this as probably a poisonous "toadstool" if I had not recently seen a description of it in Bulletin No. 15, issued by the

CHANTERELLE

Division of Vegetable Physiology and Pathology, Department of Agriculture. The treatise is from the pen of Dr. W. G. Farlow, of Harvard university, and describes the horsetail agaric as follows: "It is one of the best of our fungi, and appears in the autumn near the close of our season of fungi. It grows in dense but not very numerous clusters among grass and by the roadsides, and its stalks extend a considerable distance into the ground. As shown in the illustration, the pileus, instead of expanding, remains in the form of a closed umbrella, and does not roll outward until it begins to decay, when, instead of putrifying in the manner of most fungi, it quickly dissolves, forming a black, inky fluid. The pileus is white and is covered with large, fringy scales, to which it owes



its name. The gills are broad, lie close to the stalk, and turn from pink to black. The stalk is not infrequently eight or ten inches long, hollow, at first with a fibrous string in the axis, brittle, and has a small ring, which is not attached, but hangs loose around the stalk, so that it can be moved



HORSETAIL AGARIC

up and down. The horsetail is not likely to be mistaken for any poisonous species. While it does not in ordinary seasons appear until autumn, in exceptional cases it appears in small quantities early in the summer, then disappears, returning again in autumn."

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Another edible fungus which I frequently find in this vicinity is the Chantarelle (Cantharellus cibarius), which is common in moist woods, both coniferous and deciduous, in July and later. It is always of an egg-yellow in all its parts, and has a crumpled, irregular margin, a more or less depressed upper surface, and shallow, blunt gills which are prolonged down over the stalk in wavy ridges. People who are fond of mushrooms, and not intimately acquainted with the different kinds, should surely send to the Secretary of Agriculture for a copy of Bulletin No. 15—"Some Edible and Poisonous Fungi."

T. GREINER.

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## SALIENT FARM NOTES

**Pencil Work** When one is very much rushed with work it is a good idea to adopt the plan of one of the most successful farmers I ever knew. When he found work crowding him he would jot down in a small memorandum each task to be done, then number them, beginning with the most pressing. He kept two hired men, and after his memorandum was completed he would read it to them, so that they would understand his plans, and when one job was done they could pass to the next without a moment's delay. If any materials of any sort were needed to enable him to complete any job he would jot them down and procure them the first time he went to town. It seems like everything on his farm moves as easily and steadily as a clock. The hired men know just what to do next, and a vast amount of work is accomplished with no apparent hurry or worry.

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Another acquaintance of mine keeps a slate and pencil hanging in his barn, and on this he jots everything to be done as it occurs to him. This is an excellent idea and has proved of great assistance to one who "has a million things to keep in mind." If he is called away on business, or drives to the village seven miles distant, his hired man is never at a loss to know what to do, because he can find it on the slate. I follow this plan myself, and have for many years. There are hundreds of little jobs to be done before winter sets in, and it is impossible to keep them all in one's mind, so I jot them down, and as they are finished I draw a line through the item instead of erasing it. Another thing I do that has saved much time and worry,

and that is to make an item of what I need from town—nails, bolts and repairs of all kinds—as I find they are wanted. For this purpose I keep a little memorandum with me at all times. It is not a good idea to trust anything of much importance to memory. Carry a little book in your pocket and make an item of every matter of any importance, just a word and date is sufficient, and many a time it will save you hours of worry, and sometimes not a few good dollars.

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**Coal Supply** There are strikes and rumors of strikes continually. Mine-owners and miners' unions seem unable to exist any length of time without a lock-out or a strike. For this reason I never allow my coal supply to run low. Moreover, we are liable to have a long wet spell at any time between October and May that will render the roads impassable for a month or more at a time, and it is not at all pleasant for one to find his coal-bin empty and to have to resort to wet coals from the pig-pen when the weather suddenly changes to blustering winter. Every sensible farmer, whether he lives near to or far from town, will lay in a supply of coal right now, sufficient to last him until the roads are sure to be good again. With a good supply of fuel and flour on hand a farmer is prepared to stand a ten or twelve weeks' siege of almost any sort of weather. In this latitude it is advisable to have all hauling on the highways finished by the fifteenth of December. We may have fair roads several times during the winter, or all winter, for that matter, but I have seen many winters when an empty wagon was a four-horse load from the middle of December to April.

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**Corn-crib Floors** Many a farmer loses hundreds of dollars through failure to properly look after the little details. Before an ear of corn is put into the cribs this fall every farmer should be careful to see that the floors are solidly blocked up to not less than twelve inches above the ground. There is not the least necessity for the loss of the thousands of bushels that are annually destroyed by rats. When cribs are properly built rats cannot harbor under them, and all loss from that source is prevented. Get the floor well up from the ground, and a roof on that will shed rain, and a crib of sound corn will keep in the best condition until another crop is raised.

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**The Garden** A good garden is a source of great satisfaction to all of us, while a poor one is an aggravation. Right now is the time to prepare the ground for next year's garden. Clear all the trash off the plat and then cover the ground with a three-inch dressing of well-rotted manure. I say well rotted, not because such manure is the best, because it is not, but because it is less likely to foul the soil with weed and grass seeds. After applying the manure plow six to ten inches deep and leave it for frost to work on. It is best to leave the furrows wide open and see that all water can run out of them. If the ground is naturally inclined to be wet and cold, by all means tile-drain it, and now is the best time to do it. A person has no idea how tile-draining improves and lightens a soil until he tries it. I once owned a garden-patch that was so soggy nothing could be done with it until long after my neighbors had completed their gardening operations. One fall I put in three tile-drains, placing them twelve feet apart, and after that I could work the ground and plant a week to ten days earlier than any of my neighbors. The drains were put down three feet, and in filling in over the center drain I first put in about fifteen inches of coarse cinders and finished with earth, and it certainly was remarkable how quickly all surface-water was removed from the soil for a width of about eight feet about that drain. If the soil is heavy or clayey I am well satisfied this plan is a very good one. Do not forget the garden-patch now. Half a day spent in cleaning up, manuring and plowing now will be money in your pocket.

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**Cow-peas** Threesubscribers of FARM AND FIRESIDE have asked me to tell them something about growing cow-peas. I will, before planting-time comes, give complete instructions for growing this important and valuable forage and fertilizing crop.

FRED GRUNDY.

## OUR FARM

### FARM THEORY AND PRACTICE

**CAPITAL THROWN AWAY.**—Give me all the rich land that is now worse than wasted around the barns and homes of Ohio farmers, placing these wasted bodies of land together in one great farm, and from that farm, so formed, I would agree to secure the income of a multimillionaire. The farm would be huge in size and wonderful in fertility.

The farmers of the East have learned the necessity of housing their live stock during the winter. In the West the same thing is being learned, but the old-fashioned barn-yards are retained from habit. They were made upon a liberal scale when land was cheap and manure was not a serious consideration, and very many people cannot get away from the thought that they are yet a necessity. The old idea was that stock needed much exercise and lots of fresh air, and a big barn-yard furnished these. The exercise was gotten by dragging through deep mud, and every wintry blast brought fresh air in unlimited quantities. The result is a tremendous acreage of uncultivated land about barns that is steeped in fertility drawn from the cultivated fields of the farm.

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**SMALL LOTS FOR SAFETY.**—As an exercise-yard for farm-horses during winter the small yard is preferable to the large one. There should be no opportunity for runs at full speed, and there should not be a muddy and slippery bottom to the yard. A small lot surrounded by a high and strong fence, kept dry with coarse litter, is the safe one for horses. In such a place there is less disposition to harass and cripple the weak. Such a yard, during a part of the day, is the place for the colts or calves or other stock. The stock is kept in comfort and all the manure is saved. The large yard has nothing to commend itself, and everything to condemn it.

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**THE QUESTION OF STABLING.**—The abundance and cheapness of straw largely determines the matter of stabling all stock or feeding partly in open yards. Where straw is very abundant and very cheap, as it is in some sections of Ohio and other north-central states, the open yard will remain largely in use, during the day, at least, for many years to come. But it should be a yard so small that the ground is always covered with straw, so that manure is saved and there is comfort for the stock and its owner. In such a yard the buildings and the straw-stack afford a good measure of protection from cold winds. Where straw is insufficient for such liberal use the time has come for stabling of all the stock. Mud and exposure are not factors in the profitable wintering of live stock.

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**TEAR OUT THE OLD YARD FENCES.**—A farm home should be slightly and convenient in its arrangement of small lots or yards. There can be no rule about size and number of yards that should be made, but the farmer that is not a large stockman needs very little land devoted to such a purpose. There is no excuse for a big and muddy yard between the barn and the highway or the dwelling-house, if it stands near by. If straw is abundant, and stock is kept largely in yards during daytime, let the straw-stack be behind the barn and very near it. A yard a few rods square divided into two or more sections should be sufficient for several lots of stock that must be kept separate. Horses and cows can use the same yard at different times of the day, a half day out of their stalls or shed being sufficient for either. Two sides of the barn are sufficient for yard-room on most farms, and one may do. The yards on other sides should be abandoned for stock, the fences removed, and the land thrown into adjoining fields or set to grass to form a clean approach to the barn from house and highway. On many farms the stock should be gotten closer together, so that manure can be saved in well-littered yards; unsightly fences should be removed, mud should be dispensed with, and waste land be made to yield a profit.

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**PAINTING BUILDINGS.**—Many farmers say that they cannot afford to paint their

buildings, but it is a safer assertion that they cannot afford to have good buildings and fail to keep them fairly well protected by paint. The storms of winter

are hard upon exposed wood, and autumn is in some respects the best time for painting farm buildings. When one is busy in other work, and has the cash to pay for the painting, it is best to hire a painter; but in this day of ready-mixed paints one should not let buildings go unpainted because he cannot afford to pay a painter's wages. Any active and intelligent man can save a building from slowly rotting down by applying the paint himself, and he can do this without any great waste of paint as a result of his lack of experience with a brush. Try to find a good brand of paint. Ask the dealer to show you houses painted several years ago with his paints. Choose a color that does not fade readily. Offer cash with your order, and expect to get a reduction of ten per cent on this account. Thin the paint for the first coat, using good oil. Buy a good brush, and go at the work with a vim in the pretty days of November, when farm-work is about done. Next spring you will be busy. Apply two coats to the building that has not been painted for three or four years. The second coat will stand out and protect the wood. The expense will not be heavy. Save the buildings you have.

\*\*\*

**STORING TOOLS FOR WINTER.**—Needed repairs for all farm implements should be ordered now. Tools should be sharpened ready for spring work. I know that this advice is often given and rarely heeded, but I know from experience that it pays to have everything put away in shape ready for use. One knows just what is needed now, but by spring one forgets the weak and broken places. It takes no more time now than later on, and in the spring or summer there is comfort in having all implements ready for work. Plows and similar tools should have a board floor under them or they rust. Clean off the machinery and tools that have been in use a few years, and give them a coat of paint. This costs little and pays in improved appearance and lasting power. The name and number of every machine should be kept in a memorandum-book for convenience in ordering repairs. If this record was not made when the machine was bought it should be done before paint effaces them. Such a record is a great convenience. More study of future convenience and comfort would make life better worth living on many a farm. It is the little things that can harass the most.

DAVID.

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### DO NOT KILL THEM

#### CHAPTER IV.

#### THE GROUND-BEETLES

If, as you scrape away the loose chips at the base of a tree in your dooryard, turn over an old log in the woodland, or pick up a fallen fence-rail, you will scrutinize the inhabitants of these shelters, a number of shining black beetles varying in length

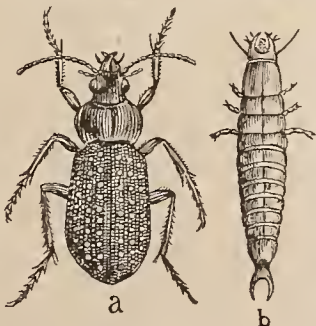


FIG. 1  
The Fiery Ground-beetle (*Calosoma calidum*)—a, beetle; b, larva (After Riley)

from a fourth to one and one half inches will usually be noticed. If the city reader be not so fortunate as to be familiar with or have access to these hiding-places, he may find large numbers of the beetles under any

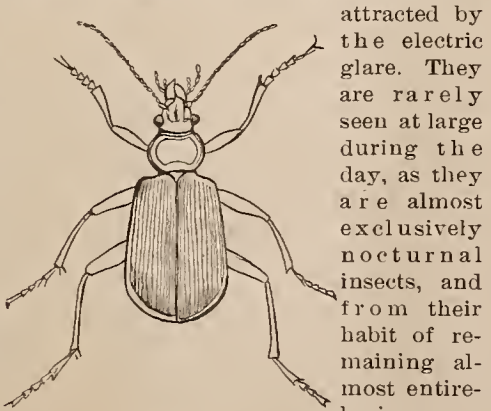


FIG. 2  
"The Searcher" (*Calosoma scrutator*) (After Riley)

are-light during the warm summer evenings; for there they are having a sumptuous banquet on the small flies and moths attracted by the electric glare. They are rarely seen at large during the day, as they are almost exclusively nocturnal insects, and from their habit of remaining almost entirely in or on the ground, they are usu-

ally known as "ground-beetles." As might therefore be inferred, they are exceedingly valuable to the farmer in destroying large numbers of noxious insects which pass a part or all of their existence in the soil. Besides the glossy black forms, which are the most commonly seen, many are brilliantly marked with gold, green, purple and iridescent tints.

The fiery ground-beetle (*Calosoma calidum*) Fig. 1-a, so called on account of the elytra being dotted with bright gold, has many times been of great assistance in helping to rid a corn-field from cutworms. The larvae of this insect are about an inch in length, of a dark-brown color, with the skin of a hard, horny texture like that of the beetle. They have strong, prominent jaws, and at the caudal end of the body is a forked appendage appearing much like another pair of jaws. It is not only sur-



FIG. 4  
The Murky Ground-beetle (*Harpalus caliginosus*) (After Riley)

prising that these larvae will eat so large a number of cutworms, as they have frequently been known to do, but also that they will dare to attack such a formidable creature fully three or four times as large as themselves. But their assault is sharp and vigorous, and the writer has often seen a single larva kill and eat in a short time several full-grown cutworms.

Many instances of the good work of this beetle are on record, among which one by the late Prof. Lintner might be cited, where he found them eating large numbers of the corn-crambus, locally known in Maryland as the corn-bud worm. Another somewhat larger beetle, called by

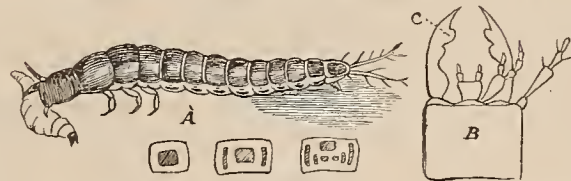


FIG. 5  
A, larva of Murky Ground-beetle; b, head of same; c, mandible

Prof. J. H. Comstock "the searcher" (*Calosoma scrutator*), and, in fact, about the largest of the family, is a brilliant metallic green, bordered with a dark purplish blue, and has the good quality of having a very particular appetite, causing him to kill large numbers of caterpillars, but only eating part of each. Fig. 2.

While in the earth as pupae large numbers of Colorado potato-beetles are destroyed by members of this family, and one species, *Lebia grandis*, Fig. 3, which is peculiar in that the wing-covers are somewhat abbreviated, thus leaving the tip of the abdomen exposed, has been noticed on the plants eating the eggs and young larvae of this old potato pest.

The family of the ground-beetles, or Carabidae, is one of the largest in that order, including some eleven hundred species so far described from North America alone, and it is without doubt the largest family of purely predacious insects. Thus considerable difference is found in the structure of the different groups into

head is much broader, as is also the thorax, which is more rectangular in outline, the wing-covers form a sharper angle behind, and the whole beetle is much more flattened.

One of the most common members of the family typical of this form is one called by Dr. Riley the murky ground-beetle (*Harpalus caliginosus*), Fig. 4. The larva of this species, Fig. 5, is of considerable assistance to fruit-growers in eating large numbers of curculio larvae, which it secures from the plums after they have fallen to the earth. From a glance at its formidable jaws, Fig. 5, b-c, it is easy to conjecture the fate of many a curculio grub.

Thus here again are found some "bugs" that are friends and not foes, worthy of all the protection that can be afforded them, and well repaying such careful observation of their habits as may be bestowed upon them.

E. DWIGHT SANDERSON.

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### POTATOES FOR BAKING

It is well recognized that the more starch there is in a potato the quicker it cooks, the more it expands in cooking, and the better it tastes, as a general rule. These things are especially noticeable if the potato be baked. When the housewife wants potatoes for this purpose she picks out the smoothest tubers that she can find, and tries to have them of about uniform size and weight. She discards all the irregular, knobbed and pronged ones, because they do not cook so well. This irregularity in the cooking is not so much due to their shape as to the smaller quantity of starch that they contain.

But among potatoes of the same size and development, and even of the same variety grown in one place, there may be a marked difference in the starch content, and consequently in their value for baking. Those best adapted for this purpose may, however, be readily separated from the others.

Make a strong pickle-brine of salt and water, and a second solution about two thirds as strong. Drop the potatoes into the weaker brine first. Most of them will float, and may be laid aside as of inferior quality. Those that sink may be put into the strong brine, and those that sink this time used for baking. They contain most starch, and will, consequently, be found much superior to the others. The tubers that float in the strong brine will, moreover, be found much more mealy than the ones that float in the weak brine. Thus there may be found three grades of potatoes in the one bin. It is a pity that they are not graded out and marketed according to their starch content.

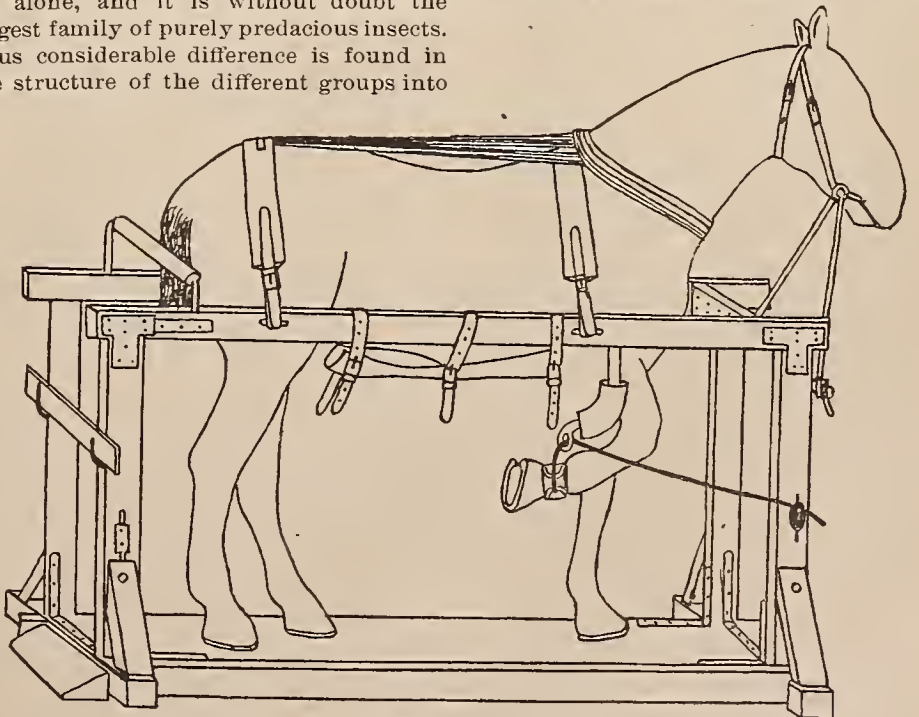
One of the restaurants on wheels common in the cities makes a speciality of baked potatoes to go with certain meats. The proprietor selects all the potatoes for baking in the way described.

M. G. KAINS.

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### A SHOEING-PEN

A pen used in shoeing and operating upon unmanageable horses has been devised by a Danish veterinarian, and re-



A SHOEING-PEN

which it is divided. The above-mentioned species have a rather long head, the thorax broadly rounded at the sides, the wing-covers well rounded behind, and a general convex appearance. In another group the

ceives much favorable mention in Danish agricultural papers. As the accompanying illustration is self-explaining I omit a detailed description of the device.

J. CHRISTIAN BAY.



## OUR FARM

### NOTES FROM GARDEN AND FIELD

**FOR THE GREEN CURRANT-WORM.**—In an earlier issue of FARM AND FIRESIDE I made mention of the trouble

I had this summer in trying to keep the currant-worm off my Columbus gooseberry-bushes. Persistent effort at last won the victory. But I had to repeat my applications of tobacco-dust more than half a dozen times before I could boast of success. In fighting all our insect enemies, and the fungous diseases of our crops as well, we have to learn this one lesson thoroughly; namely, that the chief points in treatment always are early attention and frequent and prompt repetition of the applications. We may get some relief by a one-time application, but we cannot hope to entirely clear out the enemy. Keep up the fight until the last trace of the insect or disease has disappeared, and then you have won the day, but not before. Mr. J. W. King, a reader in Nova Scotia, Canada, writes me on the subject of the currant-worm as follows: "My experience is (and I have some three hundred gooseberry-bushes) that nothing is so effective as helio-bore put on dry. I have used a tin duster, such as is used hereabouts to sprinkle potatoes with Paris green, and given a pretty thorough dusting wherever any signs of the worm appear. One year before adopting this plan I had most of my bushes defoliated."

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**THE GREEN CABBAGE-WORM.**—While on the subject of worms I might as well mention the green cabbage-worm, which never fails to make us its annual visit, although apparently coming in greater numbers, and therefore doing more damage, some years more than others. This season, for example, the damage done by them was so slight that I have done almost nothing about it. You know that we seldom do more than we are absolutely forced to do (and this is just the great mistake we usually make). If we would take the advantage of existing conditions and make our greatest efforts to finish the enemy when already almost routed by its natural foes and parasites we might make it much easier for ourselves in the future. The one great difficulty (and a most serious obstacle in the way of a complete victory) is the unwillingness of the average soil-tiller to combine with his neighbors in making joint and thorough efforts in the direction of fighting a common foe.

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**REMEDIES.**—Tobacco-dust has for years been my chief reliance for subduing the green cabbage-worm. A teaspoonful scattered over the plant has never failed, in my experience, to drive away not only the flea-beetle and the cabbage-aphis (plant-louse), but also the several worms which infest the cabbage. I shall continue to stick to this remedy, although I will confess that I do not think as well of it for cauliflower, at least after the heads have begun to form. I do not like to mar the snowy whiteness of the young flowers. Before me is a copy of the popular edition of Bulletin No. 144, issued by the New York State Experiment Station, at Geneva, for September of this year. Its title is "Combating Cabbage Pests." This treatise speaks of using Paris green for both the green worm and the cabbage-looper, the latter being considered the most destructive of cabbage pests in the South, and for the past four years a worse enemy on Long Island than the green worm. The bulletin says: "Plants of the cabbage family are especially difficult to treat with insecticides because of the crowding together of their leaves and the smoothness of the surfaces. These features of cabbage make it difficult to reach all portions of the plant, and to make the insecticide adhere when applied. Any dry power will adhere only in occasional spots upon the leaves, will generally collect along veins and midrib which are not usually eaten by the worms, and will be washed off by the first light rain. This characteristic of the cabbage and cauliflower foliage with the overlapping broods of both cabbage-worm and cabbage-looper, and the retiring habit, activity and careful feeding of the latter, make it necessary in working against them to select an insecticide that will 'stay where it is put,' and

that will carry sufficient poison to kill the loopers, even though they eat but a small quantity. The applications must be made so thoroughly that every spot of surface will be protected, and the treatment repeated at least once to insure destruction of the newly hatched worms. An excellent material for securing uniform distribution and perfect adhesion has been found in a resin-lime mixture. Make a stock solution from the following formula:

Pulverized resin..... 5 lbs.  
Concentrated lye..... 1 lb.  
Fish-oil, or any cheap animal oil except tallow..... 1 pint.  
Water..... 5 gal.

"Place oil, resin and a gallon of water in an iron kettle, and heat until resin is softened; add lye solution made as for hard soap; stir thoroughly, add remainder of water, and boil about two hours, or until the mixture will unite with cold water, making a clear, amber-colored liquid. If the mixture has boiled away too much add sufficient boiling water to make five gallons.

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"For use, one gallon of this stock solution is diluted with sixteen gallons of water, and afterward three gallons of milk-of-lime or whitewash added. The resin mixture is in reality a liquid soap, and the addition of lime turns it to a hard soap which remains suspended in the water in minute particles. The poison, one fourth pound of Paris green or other arsenite, is then added, and the particles of poison adhere to the finely divided soap particles and are thus distributed throughout the mixture in minute and uniform quantities. The soap solution is very adhesive, and thus a thin film of poison is made to stick to every part of the leaf which is touched by the spray. The application must be made by a hand-power machine, either a strongly made knapsack or a barrel sprayer, as no horse-power machine will do the work thoroughly enough or carefully enough upon cabbage and cauliflower." The station estimates the cost of two applications to the acre to be about two dollars. It still remains for me to say that simple hot soap-suds applied either in a strong spray, or, better, in a strong dash, more liberally, have often given me good results in clearing my cabbages from the green worm, and of the cabbage-aphis, also. For cauliflowers I greatly prefer this remedy to all others. It cleanses by washing. There is no discoloration as by the use of tobacco dust or tea, and no danger from poisoning.

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**THE CORN, OR BOLL, WORM.**—While in New Jersey I became well acquainted with the corn, or boll, worm. Indeed, this caterpillar gave me a great deal of annoyance, and the very early and late patches of sweet corn sometimes yielded very few ears not more or less eaten or befooled by this pest. Never before, however, have I seen more than an occasional specimen in New York. This year my late sweet corn is almost as badly infested with the boll-worm as I had it in New Jersey.

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**POTATOES FOR WINTER MARKET.**—One of my western readers asks me for plan of pit in which to keep potatoes until they may be wanted either during winter or spring. My old method of wintering potatoes, and yet largely practised in many parts of western New York, is to store them in a pit on high and dry ground, covering with six or eight inches of straw, then with a layer of soil, next with another layer of straw and another of soil, or in place of the second layer of straw and soil, with a heavy coat of coarse barn-yard manure. The covering in any case must be heavy enough to exclude frost. Much more convenient is a regular potato-cellar, in which the potatoes can be kept in bulk, safe from frost, and sorted over, taken out or put up in barrels as needed for market. Here should be chances for ventilation, windows that can be kept dark, but made to admit light when needed. Such a cellar may also be dug into a hillside, the sides walled up with stone, brick or plank, and a roof put on of heavy timbers and a coat of soil. A root-cellar such as I have often recommended for wintering celery may also be used to good advantage in wintering potatoes that are intended to be marketed during winter or early spring.

T. GREINER.

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## ORCHARD AND SMALL FRUITS

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### EXPERIENCE IN GIRDLING

In the spring of 1888 I set ninety Wealthy apple-trees in orchard; the rows were sixteen feet apart and the trees were eight feet apart in the row. On June 25, 1895, as these trees had never borne any fruit, I girdled the bodies and some of the larger branches of every alternate tree. The season of '96 I gathered some twenty-five bushels of apples from those girdled Wealthies, while from the ungirdled trees I got less than one peck. Some of the girdled trees were injured by the operation, the wound caused by girdling not healing up perfectly the same season, which indicated to me that the girdling should have been done a week or so earlier, or before the trees were so nearly at the end of the season's growth.

Not expecting the result of the girdling to cause the trees to form fruit-buds more than one season, I was surprised the early summer of '97 to find the same girdled trees loaded with apples, while the fruit was only scattering on the ungirdled trees.

I think that girdling will not injure the tree (except that injury which may come from overbearing) if properly done any time between June 1st and June 15th. Proper girdling consists in taking out a ring of bark one fourth inch or more wide entirely around the tree, cutting clean to the wood, but no deeper. Productive trees should not be girdled, as the prime object in girdling is to bring unproductive trees into bearing, and some varieties, like Rollin's Pippin, are so unproductive that about the only way to ever get the trees to bear profitably is to girdle them.—Dewain Cook, in Exchange.

✽

### INQUIRIES ANSWERED

**Time to Transplant Raspberries.**—Mrs. P. M., Lausing, Iowa. Red raspberries may be safely transplanted in autumn, while black raspberries should not be moved until spring. I think you would perhaps do best to transplant your raspberries early in the spring before the suckers have started. Put them three feet apart in rows seven feet apart, and cut off all but about ten inches of the tops.

**Best Peaches for New Mexico.**—C. G. B., Azter, N. M. I do not know what varieties of peaches will do best in your section, but if you cannot find out a good list from experience in your state I would suggest that you try the following list, which does well in parts of Texas: Alexander, Early Crawford, Elberta, Morris White and Late Crawford. These are all good varieties and include a long season.

**Grape-mildew—Fertilizer for Grapes.**—A. F., Griffin's Mills, N. Y. I think your grapes should be sprayed with Bordeaux mixture as soon as the fruit has set, and again later on, as recommended recently in these columns. It is probable that the chief trouble with your grapes comes from mildew.—There is perhaps no better fertilizer for grapes than bone-meal, four hundred pounds, and muriate of potash, one hundred pounds, to the acre.

**Fire-blight.**—J. B., Detroit, Mich. There is no known remedy for fire-blight of the apple or pear. The best treatment is to cut off and burn the diseased branches as fast as they appear. Some seasons the disease is much more abundant than others, and sometimes several years will pass in which there will be scarcely any of it. It is well to remember in pruning that the cut should extend below the diseased tissue, and that if the saw is used on diseased wood it may carry the disease to healthy wood.

**Butternut-trees.**—J. E. W., Big Prairie, Mich. The trees can be transplanted, but on account of their having an enormous tap-root are not apt to do well. The best way is to gather the nuts this autumn and plant where they are to grow, putting about three nuts in a place, pressing them into the soft earth with the foot, and covering with about one inch of soil and a few leaves. The age of bearing varies greatly, but they generally bear in about ten years from seed. They can be planted in the spring if buried in dry soil outdoors this autumn.

**Insects on House-plants.**—G. N., Fairfax, Vt. Your house-plants are troubled with at least three kinds of insects—plant-lice, scale and red spider. Plant-lice are readily destroyed by tobacco-smoke or by spraying with tobacco-water made the color of strong tea from raw tobacco. The scale are best removed by applying strong kerosene emulsion with an old tooth-brush, which breaks off the scales. The red spider is best held in check by frequent spraying with water. It is also a good plan to occasionally dip the tops of plants into water, keeping them suspended in it for about fifteen minutes without soaking the roots. This can easily be done by laying two slats across a tub of water so that they will hold the ball of earth from falling out of the pot.

**Transplanting Grape-vines.**—S. H., Milwaukee, Wis. Grape-vines can be transplanted even when quite large, and will often do very well, but in general practice a good strong two or three year old vine is as large as should be moved, and will produce a good crop of fruit as quickly as a much larger vine. Many of our best grape-growers prefer a thrifty one-year-old vine for general planting, as they are more easily handled than larger plants, cost less and fruit about as early. It does not pay to buy large vines for planting. It is generally advisable to buy plants rather than to grow them, as they cost but very little.

**Black-knot—Moore's Diamond Grape Not Bearing.**—S. G. M., Scotia, N. Y. The disease referred to is "black-knot," and the remedies were recently given in these columns. They consist of removing and burning the affected parts and painting the wounds with a heavy coat of Bordeaux mixture. In addition to this spray the whole tree in the spring before the buds swell with Bordeaux mixture to prevent any new infection. The worms in the diseased portions are there simply because they find it a convenient place, but they do not cause the disease.—I cannot understand about your Moore's Diamond grape, as it is generally productive. If it flowered and did not set fruit, I should think that probably some insect ate of the flowers, or the fruit was early destroyed by some disease.

**Grape-vine Leaf-hopper.**—C. A. C., San Antonio, Texas. The insect affecting your grape is known as the grape-vine leaf-hopper, and is very abundant and does much damage in many sections during dry weather in summer. It is a very difficult pest to destroy, since it is a sucking insect and so cannot be reached by poisons, and kerosene emulsion does not seem to affect it when sprayed on. The way in which I have been most successful has been to make a kerosene emulsion nearly as thick as soft soap, and use it as tree ink, and spread on two pieces of burlap about four by eight feet, each of which is stretched on a frame. Then with one of these frames on each side of the vine and close together at the bottom jar the vines, when the hoppers would be caught in the sticky covering. Such a cloth in effect is like a great piece of sticky fly-paper. The best time to use it is early in the morning, when the hoppers drop most easily. This pest winters over in rubbish and other protected places, and the burning of rubbish near the vines in autumn and spring may destroy large numbers.



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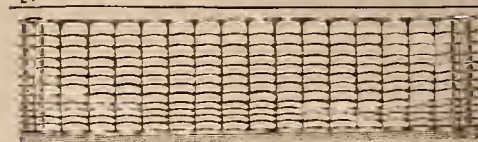
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## OUR FARM

### FARM NOTES

THE largest farm in America reports as follows: "We waste nothing; a hog would starve on all the waste to be found about here. The barn is built four feet from the ground in order to secure ventilation underneath, and the skylight windows are also used for ventilation. Thermometers are kept here and there about the barn, and we maintain a uniform temperature day and night. We do not intend to feed our animals against the cold, or have half the food used up in fighting the cold. In that smaller yard you see a part of the profits of the cattle business—the weak ones, old cows and bulls that we no longer need. We never lose any strout animals. We cannot afford to do it." This is a good lesson concerning waste. A rich farmer cannot afford to waste, and certainly a poor one cannot. I asked a grocery-man one day why he was making money while his rivals were failing about him. He answered, "It all depends upon the little things that we save or waste."

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This subject of waste covers the household as well as the outside farming. Why does not every one have his own vinegar barrel or barrels into which he constantly pours honey waste, cider waste and many other wastes that will pass into the vinegar product? I find it uot at all impossible to have five or six barrels of vinegar always in the process of making, and as many ready to be sold each year.

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I am pleased to see that Prof. Goodale, of Harvard university, insists that the tendency of advance and evolution in our fruits must be toward seedlessness. He says that there is no good reason why we should not have seedless raspberries, strawberries and huckleberries, as well as plums, cherries, peaches, pears and apples. This would involve an almost total reversal of the present process of developing these fruits. A seedless raspberry could only be produced by reducing all the pits to one, greatly enlarging that, and then eliminating the seed. We should then have a fruit very much like a large and seedless gooseberry. However, there is no question but what we may and ought to very much reduce the number of seeds in all these fruits. The new things of the future will be far more remarkable than the new things of the past. It belongs to every one of us to have a hand in creating these new fruits.

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I recommend to those who wish a really first-class delicious black grape to plant the Herbert. It is very large, and makes large bunches. It should be planted as second early. Worden makes a good early mate for it. If confined to two black grapes I should take Worden and Herbert. It must be remembered, however, that like nearly all of Rogers' hybrids, Herbert will not perfectly pollinize itself. Plant the two grapes alternately, and Worden will supply the pollen for both.

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Among the native vines most useful for our cottages, as well as most beautiful, select the wild white-flowering clematis. It will climb over a small porch and cover it with its charming foliage and flowers. Another good use for it is to plant around iron vases and other such ornaments, which are generally monstrosities, to cover the superfluity of iron castings. If you can have a rockery, especially if you have natural rocks, let the clematis climb over them.

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I have been experimenting with seeds of the Shaffer's Colossal raspberry to determine if it was really a cross between the black raspberry and the red. The seedlings almost invariably revert to the black, which shows that it is a true cross. I think that our purple berries are all of the same character. The seedlings have none of them proved to be of any value, which goes contrary to the idea sometimes advanced that the second and third generation of crosses should be better than the first. Our friend Campbell experimented with seeds of the Walter grape, and I know that others have been at work with the seeds of the Rogers' hybrids. I believe that none of them have secured as good results as the seedlings of the native Concord. E. P. POWELL.

### THE IDAHO PEA

The Idaho pea is a wild forage plant, native of the Rocky mountain regions, and therefore a semi-arid bush of much value to agriculture. It has been cultivated to a limited extent throughout the mountain states for the past quarter of a century, yielding excellent crops of feed for horses, cattle, sheep and poultry. Some enterprising seedsmen have recently introduced the pea as a novelty, giving it various names and selling the seed at high prices as domestic or imported coffee-berries. My experiments in growing this plant have been highly satisfactory and have fully demonstrated that the pea is all the most enthusiastic advertisers claim as a forage plant, stock-feed and coffee substitute. The plant grows similar to alfalfa, stooling out from the roots and sending up a dozen or more branches to a height of two or three feet. Every stem is filled with leaves, branching out at intervals of about two inches and producing a pod at the base of each. An ordinary plant will produce from two hundred to one thousand pods, containing from one to three peas. The peas when shelled resemble the little white Spanish peanut, and taste like a raw bean. When nicely browned and ground as coffee the peas make an excellent beverage, having a delicious nutty flavor, and much appreciated by old coffee-drinkers. I like the pea coffee better than the commercial cereal products or package coffees.



IDAHO PEA

A bushel of Idaho peas weighs about seventy pounds, and an acre will produce from thirty to fifty bushels. The plant is easily cultivated, requiring the same attention as potatoes to give a good yield. I planted some twenty inches apart, one pea in a place, and others one foot apart. The widest planting and least watering gave best results in the production of seed, while close planting and abundant moisture produced the best feed for stock. Every animal and fowl on the place greedily devoured the peas and would walk over all other crops to find the Idahos. Several bushels were sold as green peas, and the purchasers were delighted with the novelty. The plants have a peculiar odor that prevents insects from preying upon the seed, and a sour gum that sticks to the fingers while picking, and imparts a vinegary taste.

Idaho peas may be fed to cows and sheep while on the vine, but should be shelled and ground into meal for horses and hogs. Some farmers who have thoroughly tested the feeding qualities claim that from one to two quarts of the meal is a sufficient day's ration for a working-horse or milk-cow, and that hogs require even less. The peas may be drilled or sown broadcast and cut with a mower and stacked as beans. They shell out easily after being thoroughly dried, and can be winnowed or cleaned with an ordinary fanning-mill. The hay is as good as alfalfa, after the peas are shelled out.

JOEL SHOMAKER.

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### BERMUDA GRASS IN THE SOUTH

There is nothing prettier than blue-grass in sections where it does well. It is green all the year. In the South and West the summers are too hot or dry for blue-grass. Bermuda grass here takes its place as a lawn grass, but not as a pasture grass altogether. The latter gets wiry and tough if allowed to grow long. With close cutting or grazing Bermuda grass is lovely from frost to frost, and furnishes good grazing.

The great value of Bermuda over other grasses is its staying qualities. Its leaves die from frost or dry weather, but its roots withstand drought and tramping to an almost unlimited extent. Its leaves may

look dry and sear, but within a few days the ground will be green when weather is favorable. And when once set there is very little danger of any other vegetation crowding it out.

Another virtue of Bermuda grass is its rapid propagation. A single sprig in a favorable season will spread over a surface of many square feet. Runners are sent out in all directions, and those root and send out others. Lawn or field set with single sprigs four or five feet apart will mat the ground in a single season. Ground should be in good tilth when set.

Bermuda grass is easily kept within bounds, as it does not propagate readily from seed. Once set, though, it is difficult to eradicate. It does best on sandy soils, but does well on most soils.

Those who experience great difficulty in getting a good lawn or yard grass would do well to experiment with Bermuda grass.

JNO. C. BRIDGWATER.

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### NOTES FROM CORRESPONDENCE

FROM MICHIGAN.—I visited my daughter, living about three hundred miles north of this place, last month, and to my surprise I never found a better fruit country in my life than up there. Apple and plum trees were loaded and had to be propped up to keep them from breaking down. The foliage of the trees was dark green, the bark smooth, and the apples looked as if they had been varnished. There was not a blemish on them. These lands can be bought for one dollar an acre and upward. The land is gravel and limestone and almost clear of timber.

Benton Harbor, Mich.

F. A. M.

FROM VIRGINIA.—The season just passed was the best for many years. Corn was excellent; oats, wheat, potatoes and tomatoes were all good. The tomato crop is the farmers' main crop around here. It pays very well at twenty cents a bushel. The canning men last spring held a meeting in which they agreed that no canning man should pay over seventeen cents a bushel for tomatoes. The farmers, seeing that the cannery could not run without tomatoes, held a meeting and put the price at twenty cents; and they agreed that no farmer should raise for any less. Farmers can rule prices if they stick together.

Troutville, Va.

F. B. R.

FROM DELAWARE.—About half way down the little state of Delaware we find all that one could wish as to climate, soil, fruit, etc. Surrounded on three sides by large bodies of salt-water, the climate is tempered, and we escape the rigors of the North and the heat of the South. Cereals and vegetables flourish in this soil. It is a fruit country. The streams and bays abound with fish and oysters, clams, terrapins and ducks. Railroad facilities are good and reach all parts of the peninsula; steamboats navigate the bays and rivers. Most important of all is the healthful climate, and many come here suffering from severe cases of asthma, rheumatism, consumption, catarrh, etc., and are permanently cured or greatly improved. We have never suffered from epidemics, hurricanes or great storms. Schools and churches are everywhere convenient.

Lincoln, Delaware.

B. T.

FROM IDAHO.—Grangeville is located near the center of Camas prairie, and contains about eight hundred inhabitants. It is the supply-point for a very large area of farming country, and the largest town in the county. It is the supply-point for the mining districts of Florence, Elk City, Warren, and the recent great discovery, Buffalo Hump. Camas prairie is approximately thirty by fifty miles in extent, and is exceedingly fertile, producing from thirty to fifty bushels of wheat to the acre, and other cereals proportionately. There are still thousands of acres of native bunch-grass lying unfenced, and forming an unexcelled outrange for the stock of the farmers of the prairie. The bulk of this land is Indian allotments, although there is an abundance of wild land that will never be taken up, thus affording an unexhaustible supply of free pasture. We do not have to irrigate to raise crops. The climate is not cold in winter nor hot in summer, and is very healthful. All kinds of vegetables do well. Fruit and berries produce large crops of excellent quality. Corn does well in some portions of the country, also sorghum. Timothy is the principal hay crop, and seeds naturally. Wild land fenced up will produce good crops of timothy without sowing a seed on it. Our principal markets are the mines. Hay sells for from thirty to sixty dollars a ton; eggs, fifty cents to one dollar a dozen, and other things in proportion. Farming-lands are cheap; good homes can be had for from five to twenty dollars an acre. A railroad will be built onto the prairie soon, and then lands will advance to double what they are selling at now.

W. T. F.

Grangeville, Idaho.

FROM CALIFORNIA.—I have just been reading a leaflet of a land company which I think is rather misleading. The company claims to

have secured a large tract of land in one of the most beautiful, fertile valleys of California, Carisa valley, in which the flowers bloom from January to December, and is the home of the peach, fig, pear, grape and olive, that the valley nestles between mountain ranges that are rich in valuable minerals; that its streams are filled with trout, and that it slopes gently toward the ocean. I have lived on the Carisa plains (not valley) for eight years, and have been raising grain and other produce of the soil. The Carisa plains are about forty-five miles long and eight to twelve miles in width. The Santa Lucia mountains intervene between them and the ocean. Instead of a gentle slope to the ocean we have two mountain grades to haul over. The soil of the plains is good, but the rainfall is short. Instead of being forty inches, as stated in leaflet, it is about twelve or thirteen inches. Since I have been on the plains it has averaged about every other year dry. Fruit and nut growing is in its infancy, and has not passed the experimental stage yet. With care and plenty of water one can have flowers the year round. As to the streams being filled with trout, that is all a myth. I have never seen a trout in any of the streams of water in the mountains or elsewhere; in fact, the creeks are dry all summer, with the exceptions of a pool here and there where the stock get drinking-water. Water is obtained by digging, and then the majority of the settlers get water only fit for stock. They haul water and put it in cisterns for house use. The water is of a better quality on the west side of the plains. "Green fruit and vegetables can be had the year round," yes, if you irrigate them. The mistake made by eastern people in regard to the rainfall and climate of California is that they judge one part by another. Now there is as much difference between sections of California as there is between Ohio and Florida. The northeastern part is cold in winter, while the southern part is warm. The coast counties are cool in summer, while the interior is hot and dry; and the rainfall is greater on the coast than in the interior.

Simmler, Cal.

A. B.

## What's the Matter with KANSAS?

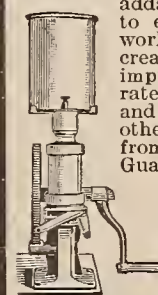
**Kansas Owns** (in round numbers) 900,000 horses and mules, 550,000 milk-cows, 1,600,000 other cattle, 2,400,000 swine and 225,000 sheep.

**Its Farm Products** this year include 150,000,000 bushels of corn, 60,000,000 bushels of wheat and millions upon millions of dollars in value of other grains, fruits, vegetables, etc.

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## OUR FARM

### FARM AND HOME NOTES

WHILE English institutions are far ahead of those of France, as a rule, English agriculture is far in the rear of agriculture in France. In England the owners of estates above one acre are 300,000; in France they are 7,000,000. In England the average extent of a single farm is 390 acres; in France it is ten acres. There are four million holders of properties of two acres in France, while the farms of two hundred acres are so few that they can be counted on your fingers. In France there are eight millions of acres, which is the exact amount which in England has been robbed from the laborers by successive close acts during less than two hundred years. Now let us see the results. In 1890 France exported over \$100,000,000 worth of farm produce, while England imported over \$350,000,000 worth. In England the rural population is 33 per cent of the whole; in France upward of 75 per cent. In England the farmer is miserably housed and servile; in France he is well to do, independent and hopeful. This contrast is dependent upon a far better system of agricultural education in France, and to small farming.

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The experiences of English farmers are so bad as to set some of them to devising systems of co-operation. Some of these experiments have resulted in societies, to which members are admitted by ballot. The society is divided into superintendents, men laborers, women laborers, and those who, from old age or from infancy, are supported from a common fund. The wages paid to these people range from eight shillings a week to the secretary, storekeeper, carpenter, etc., down to four shillings a week for the less skilled laborers. The produce of all sales is used to pay these wages, and what is left over is divided in the same ratio.

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If you were not able to cut the old canes from your raspberries immediately after finishing picking, cut them out now. Use corn-knives or hedge-clippers, and cut as close to the ground as possible. Tie the new canes to wires, or place them between two wires stretched from pole to pole. This rule is good for the Cuthbert and Golden Queen, but if you are growing Turuer or most of the other varieties now in cultivation you must keep them in hills.

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Late autumn is in some respects the most valuable part of the year. We cannot crowd in some of those items of work that constitute real farm progress. We cannot only clean up and make the place look neat and trim, which counts financially, but we can get time to plant a few trees, improve our walks and drives, make the house and barn more comfortable, get cisterns, wells and cellars in sanitary condition, and if we care for our own interest as well as the public we shall do a little to make the highway more comfortable for teams and more beautiful for the eye. On hillsides give water free courses, anticipating the floods of winter, so as to wash away the least possible amount of soil. Cover your strawberries, get your raspberries well tied up, gather humus into compost piles, spread the old compost, renew stakes and wires in the vineyards and berry-gardens, get bees into safe quarters, and make rough spots beautiful. Above all, do something toward the establishment of rural telephones, so as to break up the monotony and the isolation of farm life. If you can do no better, at least connect your house with one or two of your nearest neighbors, in order to secure help in case of sickness or thieves, or to render aid.

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One of the London papers warns us that science is creating a new world. It has invaded everything, and is revealing all secrets; it has made neighbors of widely separated places; it has girdled the earth in forty minutes. Privacy has become impossible, even that of one's bodily interior being exposed. If this be the case in the green tree, what may we expect in the dry? If infant science, only seventy-five years old, has brought this about, what will science in a state of manhood do for us? Ask the International Congress of Applied Chemistry, and you will probably hear that the age of romance is but just beginning.

E. P. POWELL.

## THE POULTRY-YARD

Conducted by P. H. Jacobs, Hammonton, N. J.

### BREEDS AND UTILITY

A fact that is now coming before the poultry fraternity at large is that more attention must be paid to the breeding of fowls for utility than has been done in the past. All thoroughbred varieties of fowls should be bred for utility first, leaving the less important points of mere fancy as a secondary matter. Not that one should advocate the doing away with breeding for feather and form, for it has been one of the great means of the rapid advance of the poultry interest during the past few years, but if all fanciers had tried as hard to breed great layers as they have to breed fine feathers the result would have been still more satisfactory. Fowls can just as well be bred to be extra layers, and still possess all the fine fancy points, as to be bred for fine fancy points without regard to egg-production. It may take much longer to bring them to the desired perfection of "standard" points, yet in the end there would be strains that combine utility with fancy. It is very natural for the breeder of fancy fowls to desire to excel at shows in "standard" points, consequently in forming his breeding-pens he takes his best "standard" birds without regard to egg-production, the result being fine feathers and fair laying, while if he had taken his most vigorous, best formed and best laying females, and mated them with a vigorous male so marked as to overcome, in greater or less degree, their bad points, and although his birds may not be so finely marked as in the first mating, he will be started on the right road and will inevitably succeed. Fanciers should not forget that the main end of poultry is to produce eggs and meat for the table, and that the chief end to be sought for is not altogether fine appearance. The aim of every fancier should be to combine the two, giving fancy a secondary place to utility, yet keeping close to points as far as possible, so as to preserve the purity of the breeds.

### COLD DRAFTS AND POULTRY

Not only the temperature but the humidity of the atmosphere must be considered in building a poultry-house. Houses are not always intended to protect against cold, but against drafts. What are termed open houses will be sufficiently open if the north and east sides are made close, with the south and west sides somewhat open. There are seasons of dampness in which the damp drafts flow down upon or over the fowls, and when this happens there is liability of roup. It is not true that a hen must be constantly ventilated, or would perish of suffocation if not exposed to a current of air, or that she wants more fresh air than a steer. We do not expose ourselves or our horses and cattle to drafts. True, the turkey roosts on trees, but it dies from roup sometimes; and the Shetland pony can endure the blasts from the North seas, but we do not keep our horses in that manner. Cheap houses may answer just as well as the most expensive. All expensive draft holes, called "ventilators," have faults. It is protection from the wind that is the most essential. When the climate is warm the hens can pick up a large portion of their food, but in winter they need assistance. The main point is to keep the houses warm, and in building a house the walls should be smooth, or built so that in summer the lice can be fought and kept down. Warmth in winter means more eggs and greater profits.

### EGGS FOR WINTER

This is an excellent time of the year to preserve eggs if they are cheap, as it will not be necessary to keep them over two months in order to get better prices. It is not difficult to keep eggs after the warm days are over. No solutions or packing in lime, salt or other substances need be resorted to. If the eggs are placed on racks or in crates, so that they can be turned half over twice a week, and put in a cool place, they will be in prime condition two months after, and will have undergone no change, being of a fresh appearance. When eggs are limed or preserved in solutions they cannot be sold as fresh eggs. It is best to separate the males from the hens, as eggs from the hens will then keep longer and better.

### HOW MANY FOWLS IN A HOUSE

In making preparations for the winter quarters of the fowls do not commit the error of crowding thirty into a room only large enough for twenty. One of the causes of disease is that of crowding the fowls and then attempting to overcome the evil by ventilation. When there are too many hens together the heat of their bodies causes ascending currents of air, and as the warm air rises the cold air comes in. If there is a top ventilator the warm air will pass out at the upper portion of the ventilator, while a current of cold air will also come in at the lower portion, which passes over the heads of the fowls, and causes the well-known cases of swelled head and eyes, or leads to roup. No poultry-house will require a ventilator if the hens are not crowded. A dozen hens in a house ten by ten feet are sufficient, and any excess over that number will render the whole liable to disease.

### HENS AND COWS

From \$60 to \$80 a year is considered a fair profit from a good cow, and she will take up three acres of ground. She must be milked every day and on Sunday, have her food regularly, her stalls cleaned and other work performed, such as skimming the milk, churning, etc. One hundred good hens on an acre of ground will produce nearly twice as much as a cow, and yet if the houses are to be cleaned daily, and one tenth of the work given them that is done for one cow on three acres, the complaint would arise that poultry requires too much care; yet if the poultry are not housed and their roosts cleaned often, how can the poultrymen expect them to be free from lice and disease or prove profitable. All the difficulties are not with the poultrymen. The dairymen have their troubles, but they work hard and make the business pay.

### UTILIZING SITTERS

Always aim to set two or three hens at the same time, and test the eggs on the tenth day. The infertile eggs may then be removed from the nests, the fertile ones remaining may be given to fewer hens, and the liberated hens may be started again with other sitters. When the next testing is made these hens should be broken up and the new sitters finish the hatches. Do not waste time and feed by allowing one hen to carry only a few chicks. Such a course may answer for winter, but in fall, spring and summer "double up" the broods, so as to have the extra hens for layers. No hen should be allowed to stay with her chickens in summer after they feather. Separate them, as the chicks can care for themselves and the hens will soon begin to lay regularly.

### CHANGE THE FOUNTAIN

The frost will cause the ordinary water-fountains to crack and become useless, and they should now be put away and wooden troughs substituted. The troughs should be cleaned at least once a week, and scalded, or thick scum will accumulate on the sides and bottoms. A small lump of lime in the water will be an advantage in the troughs, and they should be emptied every night and filled in the morning.

### STORE THE LEAVES

Have a place for the storage of leaves under shelter, and they will be found equal to anything that can be procured for the

use of the hens in winter. They afford the best material in which to scratch, and also prevent drafts of air along the floor. Along with the leaves lay in a plentiful supply of dry dirt, and the winter work will be lessened.

### INQUIRIES ANSWERED

**Colors of Breeds.**—H. N. B., Peoria, Ill., writes: "1. Which variety of Plymouth Rocks breed the truest to feather? 2. Which of the Wyandottes? 3. What breeds thrive best when penned?"

REPLY:—1. The white variety. 2. White. 3. Cochins and Brahmas.

**Blood-meal.**—A. M. S., Olean, N. Y., writes: "Would you advise the use of blood-meal instead of meat for laying hens?"

REPLY:—Blood-meal is excellent and gives good results. It may be used in place of meat, or with it if necessary, but it is better to allow meat also if it is cheap and easily procured.

**Vertigo and Ducks.**—O. H. B., Defiance, Ohio, writes: "My ducks seemed well until half grown or larger, when they were suddenly attacked with staggers or dizziness."

REPLY:—It is probably due to feeding too much grain. Ducks will not thrive on concentrated food, as they require the larger proportion to be bulky. Grass alone is all that is necessary for them in summer.

**Leg Weakness.**—Mrs. F. E. W., Oxford, Mass., writes: "I have a young pullet which has lost the use of her legs. I lost a cockerel in the same manner. I feed bran, corn-meal cracked corn and scraps. They have full range."

REPLY:—The cause may be due to injury of some kind, or from jumping off a high roost. It is probable, however, that the grain diet in summer, with the food from the range, has made the pullet overfat.

**How Much Feed.**—L. A. G., New Orleans, La., writes: "What is best to feed in summer and winter, and how much?"

REPLY:—Something depends on the climate. In summer grass, lean meat, insects, seeds and substances picked up on the range are sufficient. In winter grain may be added. There is no rule for quantity, as no two birds are alike or eat the same amount. It is best to give not over half as much as they will eat in the morning, nothing at noon and a full meal at night. If on a range give nothing in summer.

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## QUERIES

### READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

**Sorghum-molasses Vinegar.**—E. S. S., Searcy, Ark. Dilute the molasses with warm rain-water, using about six gallons of water to one of molasses, and let the mixture ferment just as in making cider-vinegar.

**Frost and Celery.**—J. A. S., Crocketts', Va., wants to know whether frost is very hard on celery. A light frost will do no particular harm to celery which is yet in the field, but all celery when once taken up and stored in the cellar or trenches should be carefully guarded against even a touch of frost. If it does no more, it will cause the leaves to get wet, without chance to dry out, and they will rot. For methods of storing for winter see reply to Mrs. W. H. T.—T. GREINER.

**Fertility from Clover.**—J. T. E., Lincoln, N. Y., writes: "Is any fertilizing value of clover lost by cutting it the first of June and letting it lie on the ground all summer? Or should it be plowed under before cutting? Will it pay to seed clover with oats in the spring to plow under for wheat in the fall?"

REPLY:—Plowing for wheat should be done as near after oat harvest as possible. It is only in an unusually favorable season that the growth of clover in oats amounts to much between spring and the time of plowing for wheat. The greatest increase of soil fertility from clover can be obtained by allowing it to grow to full maturity, that is, until it forms its seed. It is said that clover-roots double in quantity between the time of cutting for hay in June and the time the seed is ripe. If you do not care to cut the first crop for hay, clip it before it becomes too heavy, and repeat the clipping if necessary; then cut the second crop for seed or plow it under. For special purposes the first crop is sometimes plowed under when in bloom. When you consider that the root is about one half of the clover-plant, and that its greatest development takes place between the first and second crops, you can see the reason for allowing the plant to reach full maturity.

**Fertilizer Formula.**—J. A. R., Massachusetts, writes: "I like what you say about home-mixed fertilizers, and wish you would give us a recipe for a general-crop fertilizer. We common farmers are not posted in the big names of some of the ingredients mentioned, or the percentages, etc., but if you will tell us to mix thoroughly so many pounds of each ingredient, and tell us how much a pound to pay for it, we think we can save money in making our own fertilizers, and be greatly obliged to FARM AND FIRESIDE."

REPLY BY T. GREINER:—I wish I could help our friend, but am afraid I cannot. Each one must work out his own salvation in this respect. In order to apply fertilizers with best effect one must know what he is doing. In one case you may need mostly potash, in another phosphoric acid, etc., and if you do not know which is required you are working in the dark. Read a popular treatise on manures, such as Gregory's, Semper's or Greiner's, and you can easily discover for yourself what formula will most likely suit your conditions. For grain crops on heavy loams the ingredient most likely to give you good results is a good superphosphate, such as acid phosphate or dissolved South Carolina rock, which costs from eight to eleven dollars a ton. For fruit crops, especially on light soils, potash is more likely to be needed, and can be supplied in muriate of potash (\$45 a ton), etc. Study.

**Salting Pork.**—S. N. G., Monticello, Iowa, writes: "Please give recipe for pickling or salting pork. I always get mine too salty."

REPLY BY T. GREINER:—For many years we have salted our pork according to the recipe which was published in the New York edition of FARM AND FIRESIDE in the winter of 1897, as follows: Cover the bottom of a clean, sweet barrel with one inch of salt, pack down tightly a layer of pork, and cover with one inch of salt. So proceed until the barrel is nearly full, the rim side to be placed next to the barrel. Make a brine by boiling so strong that it will bear up an egg, keeping the scum skimmed off while boiling. When cold, pour the brine on the meat, enough to cover; then weight it down. If scum arises at any time after the brine is on the meat, pour it off and boil again, adding more salt. As a matter of safety, pork packed in the fall or winter should have the brine poured off in the spring and boiled again. Pork should not be packed until the animal heat is all out, nor should it be permitted to freeze before packing. We have never had meat spoil when thus packed, and never found it too salty. It may be well, too, to add the recipe for pickling pork, hams, shoulders, etc., which has always given us perfect satisfaction; namely, One hundred pounds of meat, six gallons of water, nine pounds of salt, three pounds of brown sugar, one quart of molasses and six ounces of saltpeter. Boil, skim, and let stand until cold. The saltpeter is dissolved and added to the pickle when cold. Pack the meat, and pour the pickle over it.

## VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

**Perhaps a Case of Tetanus.**—C. A. V., Panola, La. The few symptoms mentioned in your very indefinite description of your case point toward the presence of tetanus, and if this is correct your horse by this time will have ceased to suffer—will either be dead (most likely) or will be well again.

**Docking the Tails of Lambs.**—E. C. A., Arlington, Wis. As this is an operation almost exclusively performed by shepherds on lambs only a few weeks old I have no experience in the matter and cannot answer your question; neither am I convinced that the operation is absolutely necessary.

**Apoplexy.**—S. L. C., Indian Creek, Va. Your sow died of apoplexy, or what is the same, internal hemorrhage, in consequence of a sudden bursting of an important blood-vessel. Whether or not the meat of such an animal is fit to be eaten is perhaps more a question of taste and training than of hygiene.

**"Bloody Murrain."**—C. H. A., Indianapolis, Ind. "Bloody murrain," particularly in the Southwest, is simply a synonym for Texas, or southern, cattle fever. In Scotland it has, of course, a different meaning, and is, it seems, sometimes applied to a certain form of anthrax. It is a term not recognized in veterinary medicine.

**Umbilical Hernia.**—R. D., Ionia, Va. An umbilical hernia is best removed by a surgical operation, to be performed by a qualified veterinarian. If your colt is yet a suckling, and the hernia is only a small one, it may be advisable to postpone the operation until next May or June, because there is a prospect that the hernia will disappear after the colt has been weaned for some time; but if the same is a large one, so that there is no prospect of its disappearance, it is advisable to have the operation performed as soon as convenient.

**Warts on Cow's Teats.**—F. S., Breedsville, Mich. I have to conclude from your inquiry that the teats of your cow are covered with small warts. If such is the case, about all you can do while the cow is in milk is to see to it as much as possible that no wounds or sores are produced by the milking, and then to anoint the teats after each milking with a little sweet-oil, or with a mixture of equal parts of lime-water and sweet-oil. Such warts usually disappear, if not irritated, without any treatment in the course of time. If treatment has to be applied, it must be done when the cow is not in milk.

**Fatal Disease and Death Resulting from Overwork.**—F. B. A., Farmington, N. M. There can hardly be any doubt but that the "hard drive of over seventy miles in one day," especially if the weather was hot and the horses had to suffer from want of water—were not watered sufficiently often—constituted the sole cause of disease and death. The great weakness and the inability to swallow, as described by you, undoubtedly were due to a degeneration of the muscular tissues in consequence of defective nutrition, caused by an abnormal thickening of the blood, and hence the inability of the same to furnish nutrient material to the tissues and to carry off the products of waste.

**Blackleg or Foot-rot.**—J. D., Nobleton, Ontario, Canada. Blackleg and foot-rot are two entirely different diseases. The former principally attacks young cattle, and almost invariably becomes fatal in a very short time. It can be prevented by either keeping the cattle away from such places in which it occurs, or by producing immunity by means of a protective inoculation; but once developed it must be considered as incurable. Footrot, on the other hand, is a disease of a local character, and has its seat not in interior parts, but in the feet, particularly of sheep. It becomes fatal only in its most advanced stages, and then only indirectly. Now if you will tell me which of these two diseases you mean I may be able to answer your question.

**Probably Lung-worms.**—T. S. H., Ft. Edward, N. Y. Your sheep very likely have lung-worms (*Strongylus filaria*) in their lungs in sufficient numbers to cause sickness and death. There is no remedy, because the worms, which have their seat in the finest bronchial ramifications, are inaccessible to any treatment not more injurious to the sheep than to them. Your sheep must have been grazing on low and wet ground, or on ground containing stagnant water, for it is in such places the worm-hood is found and picked up. Such places, therefore, especially if once infested, should be carefully avoided, because if that is done and the sheep are kept during the whole year, but particularly in the spring, on high and dry ground, destitute of any stagnant water, such worm-diseases will not develop, for no worm-hood will be picked up.

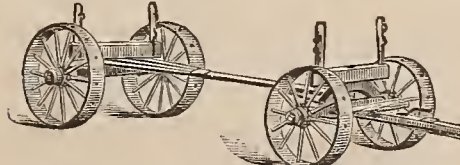
**Itching Tail.**—G. P. B., Chualar, Cal. If the roots of the hair of your mare's tail are not diseased you will succeed in removing the itching sensation if you apply, after the tail has once been thoroughly cleaned with soap and water, once a day, for a few days in succession, a good wash with a five-per-cent solution of creolin in water; but if the roots of the hair are diseased, or have lost their vitality, so that the hair is falling out, any treatment will be in vain, and no matter what you do the mare will get a so-called "rattail."

**An Old Sore.**—W. C. T., Anita, Ia. All wounds and lesions of any consequence situated below the so-called chestnut or horny wart on a horse's leg, unless brought to healing by first intention, without suppuration, will produce horny scar-tissue, and that the more the longer it takes to bring them to healing. Such scar-tissue, it is true, can be removed by means of the surgical knife or by caustics, etc.; but this does not a particle of good if the wound thus produced is again allowed to suppurate and is not brought to healing by first intention, or if the borders of the wound can not be brought and be kept in contact with each other. Wounds below the so-called chestnut cannot be stitched, but its borders have to be kept united by judiciously applied bandages, and suppuration has to be prevented by strict asepsis. To do this is comparatively easy if the wound is fresh and if no loss of substance has occurred, for then the borders of the wound can be brought, and he kept, in contact with each other without much difficulty. All this is entirely different if the wound is an old one, and if borders can be brought in contact only with great difficulty, or not at all. If anything can be done to advantage in a case like yours the treatment must be personally attended to by a competent veterinarian who knows how to produce and to maintain a perfect asepsis. It can, therefore, not be treated from a distance.

**Would Suggest Anthrax.**—C. K. S., De Smit, Idaho. Your description of the dying of over one thousand sheep out of a flock of two thousand, all inside of three weeks, would suggest anthrax, also called charbon, as the cause of death, if you had found the spleen diseased and enlarged and the blood non-coagulated, black and tar-like; but unfortunately you have not examined the spleen, and do not say anything about the appearance and condition of the blood. If the dying had begun while the flock of sheep was grazing on the wheat and oat-stubble fields, and not before, one, taking into consideration the bloating, or extensive development of gases in the paunch of the sick animals, which you observed, might feel inclined to accuse the usually rank, very juicy and rather insipid vegetation produced on such stubble-fields as the primary cause of sickness and death, because such vegetation as a rule possesses in a high degree a tendency to ferment, and consequently, if consumed in large quantities by herbivorous animals, to cause bloating. If you had as warm and moist a summer in Idaho as we had in Ohio, it may be that the grass and other food-plants on the bottom-land of the St. Mary's river and on the wooded hills were exceptionally luxuriant, rank and juicy or watery to such an extent that, consumed in large quantities, it developed about as much tendency to ferment as the rapidly growing young vegetation and the decaying grain found on stubble-fields in a wet season. Howsoever all this may be, there can be no doubt that the fatal disease was either very infectious, or that the cause of the same acted upon the whole flock. If the latter was the case, the fact that the sheep now dead did not take sick and did not die all at once, as very likely would have been the case if the flock had been poisoned, is easily explained, because the greed for food and the resistibility against injurious influences is not the same in the individual animals.

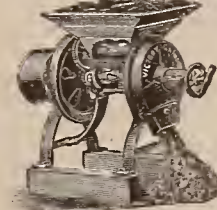
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## THE LOST WILL

By Will Allen Dromgoole

### CHAPTER III.

#### GETTING A LAWYER IN



It was a good time for confidences. The Irish farmer had made his trip to the county-seat, had returned, delivered the black dress-goods, fed his stock, had his supper, and was seated with Nora before a bright fire, with his pipe between his lips and a look of content on his face. Nora was seated by a little work-table, with a pair of heavy gray trousers across her knees. The trousers were several sizes too small for the big Irishman on her right; moreover, the rent in the left leg could have been made only by a base-ball loving boy. She nodded over her work brightly, and tried to listen to the story Mike was telling her. But for the life of her she couldn't help chipping in with a comment now and then.

"He wants to make a new will, Nory," said Mike.

Nora nodded.

"And the ould cat won't give him the chance?" said she.

"The will he made at the honeymoon—"

"The devil's own work," declared wicked Nora. Mike winked to the blue smoke curling over his head, and said:

"Yis, that's what Oi always say of the honeymoons—the devil's own work." And it takes the devil to keep up with his work after it's done, Oi'm thinking. Faith, if you throw the lamp at me you'll be firing the house over your own head, my Nory. Take the cat, my honey; she'll throw soft, and light on the fate of her. Aisy, now, my girl. Oi was only agreeing with you, you mind."

"Agreeing!" snapped Mrs. O'Bryan. "As if ivery woman as iver married didn't know it ended with the vow, surely, the honeymoon."

A softness crept into the voice of the Irishman as he said:

"Oi know one that didn't. Oi know one that niver ended, and that niver will, plaze beaveu."

The needle came to a sudden stop in the gray wool; a silver drop trembled for an instant on the dark lashes that veiled the saucy eyes of the sewer, and then two hands, one wearing a silver thimble, one a golden marriage circlet, were reached out and clasped about the Irishman's knee.

"Go on with your story, Mike," said she, "and don't be minding an ould wife's tongue. The Irish tongue is iver a bitter one, Oi'm thinking."

"And the Irish heart a true one," said Mike, as he covered the hands with his own brown palm.

"Go on with your story, Mike; Oi'm dying of the curiosity, sure."

"He wants to make a new will," said Mike, "with more justice and less—honeymoon—"

"We'll take up the honeymoon when we're done with the will, Mike," said Nora, releasing her hands and threading a new needle. "Go on, now, will you?"

"And the ould cat won't give him the chance," said Mike.

"Needs her claws clipped," said Nora.

"Sets there day in and day out, soft as pie, and niver a wink of the man's eyes escaping of her. But while she was over here talking the sample talk the sick man says to me, says he, 'Mike, if Oi could see Lawyer Brewer an hour Oi could make my boy safe. But,' says he, 'as well talk of a month as one hour. She sets here with her eyes on me till the breath leaves my body, and all the time that dastardly honeymoon will in the bottom of her trunk a-burning in the bottom of my heart like a fire. And now,' says he, 'what's to be done, Mike?' Says Oi, 'The lawyer'll be here to-morrow night, neighbor.' At that he a'most jumps out of the bed, and says he, 'It won't do, Mike; it won't do; she'll niver let him come in.' Says Oi, 'Wait till Oi see Nory; she's my executioner. The lawyer'll come in and the madam'll go out,' says Oi; 'Oi don't know how it's to be done, but it'll be done. Nory'll fix it.' And now, Misthress O'Bryan, will you plaze to fix it?"

"Aisy enough," said Nora. "What we've got to do is to clip the ould cat's claws, Mike. And now fetch me a drink from the bucket, Mike, if it plaze you."

No sooner had Mike started upon her bidding than Nora jumped onto a chair, and reaching up to the old tall clock on the mantel, gave the hands a swift whirl forward, so that by the clock it was just one hour from the time Mike stepped out into the kitchen to get the water until he returned with the dripping dipper, carefully shielded with his hand, to offer Mrs. O'Bryan a drink. She looked up at him in a sort of stupid wonder for a moment; she had forgotten all about the water.

"Didn't you ask for a drink, Nory?" said Mike.

"Sure, and if Oi did," snapped Nora, "did you expect me to drink the dipper?"

"Ah, Nory," said Mike, "and did you expect me to fetch it in my hands?"

When they were again seated Mike took up his pipe, relighted it, and said:

"Nory, can you guess what Oi think is the biggest rascals going, now?"

"Sure," said Nora, "and Oi'll not try. You'll be telling me, like our Tim told me, that it's stepmothers, sure."

Mike shook his fat sides laughing; but before he could enlighten her as to the nature and name of the "rascals" the clock on the mantel began to strike. Never had it seemed to strike so loud. Mrs. O'Bryan bent her pretty face lower over Tim's school breeches, lest Mike should see the smile that would come, and seeing, proceed to rebel against her proceedings.

As the last stroke ceased to sound the farmer took his pipe from his lips, and exclaimed:

"Eight! Why, she's bewitched! It's not five minutes since she struck seven—not five minutes!"

Mrs. O'Bryan began to fold up her work.

"And that's your thanks, is it," said she, "for the good company that makes the hours into five minutes, Michael O'Bryan? Well, well; maybe the ould cat was wisest after all, to get the most she could out of the honeymoon. Five minutes, and iver a kiss nor a compliment to mark the strides the ould thief in the clock is a-making. There! and we'll be

the firelight fell upon it. For she had hustled Mike off to bed, as she told herself, because she wanted a quiet moment in which to think out the problem of getting Lawyer Brewer into the farm-house over the hill, after successfully getting the mistress of it out. More than once, as she sat there as demure as a saint, darning away on Tim's old trousers, she would stop to pat the gray wool affectionately, and say:

"Now, then, Timmy, you'd ought to be feeling sorry for the poor b'y up yonder, with the mother of him under the ground this day, and the ould cat's claws a-scratching of him the while. But we'll clip the claws, Tim; we'll clip the claws."

The hands of the clock pointed to one before she put the ashes upon the fire, turned the hands back to their proper time and crept into bed.

When she awoke the sun was shining, there was an odor of boiling coffee in the air, deliciously appetizing, and Mike was calling her to breakfast. When her demure Irish face appeared in the kitchen doorway Mike looked up from the potatoes he was frying, and said:

"Sure, and if this ain't calling the honeymoon off my name's not Michael O'Bryan."

"Niver a bit, Mike; niver a bit," said Nora.

"But this is the behaving that kapes the great moon on the full, Mike. So do it again, Mike, do it again; but be sure," she added, with a knowing little nod, "the executioner has got the ax sharpened for the cat's claws. And he sure you won't get to bed at seven to-night, Michael O'Bryan; so it's jist as well you had your nap."

He looked at her rosy fat face beaming at him over her coffee-cup, and fancied he had never seen her looking half so well and pretty. Surely she was blessed with good health as well as good looks. He thought of it more than once during the day.

Then it was Mike began to understand. His big round face was fairly beaming with the wonder and fun of Nora's daring exploit.

"But, Nory," said he, "you've always been strong as the ox—"

"Sure, and they're the ones that always took the worst, Mike. Now, Oi'm going straight to bed with the pain in my—my—heart, Mike. And you're to saddle the mare and go for Mrs. Malviny Womack, my neighbor, to come and sit with your sick wife till you can ride for the docthor; see? Oh, she can't refuse after the ten yards of alpacca and the favor of the money, Mike; she can't refuse. And while you're gone I'll slap the mustard to my side, where's there's a new pain come—from laughing, maybe. Oh, go on with you, Mike, and trust the 'executioner' to hold the ould cat. Oi'll hold her if Oi have to tie her to the bed and shoot her, Mike. Oi'll hold her till five o'clock in the morning; after that—well, the charm ends at five o'clock in the morning, so out with you."

And then it dawned upon him in all its glory—this delightfully daring and brilliant bit of Irish scheming—and the man of the house laid back against the wall and laughed so long and so loud that she threatened to scald him with the kettle of water if he didn't go at once for the doctor.

It was too good, too funny. It was bound to fail; he told her so; told her she would give it away herself with laughing.

"Sure," said she, "and that's all Oi'm afraid of, Mike. If I can kape from choking with the laugh, and crouch down among the feathers so's my sides won't show the shake of them, Oi'm all right, Mike. Oi'm mixing a mush for the sides now. And mind you, Mike, if Oi don't laugh it's pleurisy Oi've got; but if Oi do laugh it's—fits."

"Sure, Nory," said Mike, still choking with laughter himself, "the docthor'll see through your shamming."

"To be sure, you idiot. That's why Oi want the ould fun-loving one; he'll feel for the b'y as is being cheated at the same time that he'll be laughing to see the ould cat's claws clipped, Oi'm thinking."

It was a ridiculous and daring thing to do, and, as Mike said, almost sure to fail. But the fun of it, no less than the object, appealed to his Irish nature, and for the moment forgetting the nature of the woman with whom he had to deal, before Nora had ceased scraping her poultrie-paw and crept into bed with a comical grunt he was knocking at Mr. Womack's door. There was a moment's silence, then a sound of footsteps hurrying along the hall, and Mrs. Womack herself stood before him.

He was so taken aback that for an instant he was off his guard. He realized what a doubtful thing it was, this taking advantage of a neighbor's confidence to carry a point against her. He hesitated, but the sound of sobbing at that moment caught his ear, and through the open back door of the hall he saw Wesley creeping up-stairs with his hand before his face.

The sight roused him fully as much as Mrs. Womack's voice, which demanded, in tones anything but neighborly:

"What do you want here?"

Clearly Mrs. Womack meant what she had said; she would "put him out" if it came to the point of necessity.

In a moment, however, Mr. O'Bryan was himself again.

"Sure," said he, "and it's Nory, Mrs. Womack. She's gone to bed with a poultice to her side and a plaster to her back, or my name's not Michael O'Bryan. And it's me she sent to ask you to come over and set with her until Oi can ride for the docthor, ma'am. And it's myself will be after thanking you from my heart, Misthress Womack, surely."

Sharp as she was, and as crafty, Mrs. Womack was completely fooled by Mike's lugubrious tone and manner. Moreover, the favor of the black dress-goods was still fresh in her memory. She had few neighbors who had not felt the sharpness of her tongue and learned to leave her gloriously alone. She was not insensible to the fact that the O'Bryans were friendly and disposed to be kind. She couldn't well refuse them such a favor at such a time.

"Nora?" said she. "Why, I left her well enough only yesterday."

"Sure, Misthress Womack," said Mike, "and they're the ones that be always taken worse when the spells do come, ma'am. And she's that convulsed that Oi'm after riding for the docthor, ma'am, if your man's able for you to leave him the while."

"Yes, wife," came from the sick man's chamber, "go on; do. Stay all night if necessary. Wesley can lie on the lounge here, and I'll do well enough. Come in, Mike, while she gets on her things, and she'll go right back with you. Don't mind me; don't think about me."

Without the faintest suspicion of treachery Mrs. Womack hastily drew on her rubbers and wrapped her throat in a red woolen comforter. It was perhaps just as well that Mr. Womack was sincere in his entreaties and as much in the dark as she herself as to what was on foot. For once, while his wife's back was turned, a sudden, sharp, knowing wink telegraphed him from Mike's little round black eye gave him such a start that had his wife turned around a second sooner Mrs. Nora would have made her own poultices that night, certain. When she did turn she saw the white, scared face upon the pillow, and exclaimed:



HE RELIGHTED THE STILL SMOKING LAMP AND OPENED THE DOOR

going to bed, Michael. I be that fagged out with the trip to town this day."

She yawned in a way that set the big farmer laughing until he had shaken all the fire from his pipe.

"Tired, be you, Misthress O'Bryan?" said he. "And maybe you're tired of feeding the stock and milking the cows and cutting the wood"—to all of which Mrs. O'Bryan was vigorously nodding approval—"and maybe you'll be after getting into a pair of my ould breeches in the spring and plowing the fields, and in the fall a-gathering of the harvest?"

"Niver a bit, Mike; niver a bit," said she. "Don't you be undervallying the wit of your wife. It's the new breeches she'll be after, Mike; not the ould ones, sure. And now to bed with you. I tell you the trip to town has that finished me—"

"But Nory," said Mike, "I want to talk to you—"

"Niver a word to-night, Mike; the trip to town—"

"Faith," said Mike, "I belave she has persuaded herself that she really took the trip to town, and got all the tire of it, too. To bed at eight o'clock—"

He went, however, and when Mrs. O'Bryan heard him contentedly snoring, as was the case in less than ten minutes after she had hustled him off to bed, she went back to her seat before the fire, unwrapped Tim's trousers and went to work again. But she was not laughing over the joke she had perpetrated; the pretty face wore a solemn, serious look as

"Niver sick one blessed day since she came to me," he told himself, when later in the day he watched her heave a barrel of meal into the lock-up, just as she declared, to show him she had the muscle to back the mind that willed to do it.

What must have been his surprise, then, when about dusk she came in with a kettle of water and a bowl of mustard. To these were added a pau of corn-meal, a silver spoon and a glass tumbler. Then she sat down on the floor, and amid peals of laughter began to take off her shoes and stockings. Accustomed as he was to his wife's amusing means of reaching a good end, Mike was at a loss to understand this last maneuver. She read the perplexity in his face, and said:

"Saddle the mare, Mike; you're to go for the docthor, quick."

Mike stared and looked at her over his pipe. "Which one will you have, Misthress O'Bryan?" said he. "The one from the lunatic asylum?"

"Niver a bit, Mike. Oi want the good ould docthor from the town; the fat one that knows a joke when he sees it, and has got a heart inside of him, Mike. The same that doctored our Tim of the fever last year; the ould fellow that loves a laugh and ain't ashamed of a tear. He's got the Irish blood in him, and he'll do. Go fetch him, Mike; and if you've any little jobs of your own to do in the town, you can do 'em at the time; only kape the docthor with you till all the jobs are done, Mike; you'll be uading of witnesses, maybe."

"Now, pap, you're took again; just look how you're trembling all over!"

"Nonsense!" said the invalid. "I saw you about to elbow a tumbler of water off that candle-stand there, and it gave me a turn. My new croppers will move in to-morrow, Mike; I didn't expect 'em for some weeks yet. I'm glad they're coming sooner, though; I need 'em."

"Yis," said Mike, "I heard they were coming; mine don't come for a fortnight. That's what knocked the ould girl up, maybe—too much work. She's done everything the last four wakes, has Nory. Now, Misthress Womack, if you're ready?"

Again that sharp, knowing wink, followed by a slightly perceptible nod from the head among the pillows, and the door closed on trickster and tricked.

When they were gone Mr. Womack called the boy who had been sobbing the while in the garret.

"Wesley," said he, when he stood at his bedside, "I want you to make a pot of fresh hot coffee, son, and before midnight to clear away all traces of it. And I want you to bring in a table, and pen, ink and paper; set it right here by the bed. And then I want you to forget all about it—not to know what happens at all. When I rap, you just set the coffee-pot on the door-step and run away. Put two cups and two saucers by the side of it. You might set the sugar-bowl there, too. Then go to sleep till I rap again, when you can come and clear it all away. Run on, now."

As the boy turned to obey the sick man called him back.

"Wait," said he; "I want to say something else. Whatever may happen, I want you to know that what I am doing to-night, although it may seem strange and unreal to a boy like you, I want you to know that father is planning for you. He promised your mother, and he is trying to fulfill his promise, that is all. So if anything comes up that may cause you to be punished—get a whipping—I want you to hold your tongue about things here to-night, believing it is all done for you and will only mean good to you at last. And there's another thing; I may never have a chance to say it again, so I want to say it now: Don't make money the object of your life; that would rob you of the chief beauty of manhood—tenderness and human sympathy. But bear in mind and be sure to make enough to enable you to always hold up your head among men—enough for manly independence. Don't be a sponger or a dependent upon anybody. Starve first; it's more honorable. Earn the bread you eat, and feel yourself a man. Run on, and always remember what father said."

With feelings strangely stirred Wesley went back to the kitchen to prepare the coffee. His father's admonition rang in his heart like bells playing. In an instant, as by a magic touch, his eyes were opened, and he understood his position toward his stepmother. It was not that she entertained any positive dislike for him, or that she was really envious of him. It was merely his position as dependent, and the natural attitude of a small nature that had suddenly acquired power over a weaker one that looks to it for subsistence. He understood, felt the meaning of dependence. While the coffee was making he sat before the kitchen fire musing upon his father's words and their great meaning, when suddenly the clock struck nine. Almost at the moment he heard the sound of footsteps coming along the walk to the front door. He roused up, shook himself and listened, thinking for a moment it might be his mother returning. But there were too many steps; moreover, there was a stealthy something in the way they came up the walk, passed into the hall without any sound of knocking, and then into his father's room. Then Wesley understood that it was for these footsteps that his father had been waiting.

It was ten o'clock before the rap came for the coffee. He lifted the steaming pot, set it on a waiter beside the cups and sugar-bowl, carried it softly to the door, rapped gently on the wooden panel, and went back to the kitchen. He heard the door open, and understood that some one had carried the tray into the room. Then, drowsy in spite of the unusual proceedings, he fell asleep before the kitchen fire, and did not waken until his father's rapping called him to his side again.

The invalid was lying back upon his pillow with his eyes closed and a look of inexpressible content on his tired, pale face. Beside him, on the table, lay a folded sheet of legal paper, and across the top, in a man's bold business hand, the boy's eye caught the words, "LAST WILL AND TESTAMENT," and after them, on another line, the name "Womack."

As Wesley approached, the sick man opened his eyes and pointed to the dishes.

"Clear them away, son, quick. She may stay all night, she may come any minute, just as her mind moves her. Wash them up, quick, then hurry back; I want you, special."

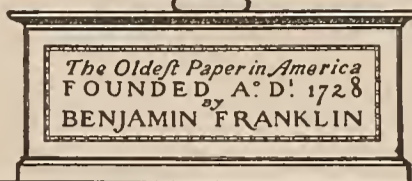
Wesley soon cleared away all traces of the midnight refreshment, covered the kitchen fire, and was back at his father's side. He was awake and waiting.

"Can you sew, son?" said he, a strange, restless gleam in his eyes.

"A little," said Wes. "I sew on all my buttons."

"Get the needle and thread, quick. Now rip open this mattress under my head. Don't look so scared, son. I selected this one because it is new; she'll never think of renovating it until—until I'm gone."

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Nervous and tearful Wesley ripped a few stitches in the ticking and looked up at his father.

"Slip the paper in, son, as neat as you can," said the sick man. "Now sew up the rip. And while you sew I want to tell you this is my will—my last will. If anything happens unexpected you know where it is, and the witnesses are all signed all right. It gives you the farm; it was your mother's. There is some stock and personality; I gave that to your stepmother, together with the little place in town. It isn't so much, but it will give you a start, and you must do the rest. And always be kind to your stepmother, Wes. She's sour and bitter and hard sometimes, but she's a woman, and she'll be different by and by. When you have got the lines in your hand she'll treat you fair. Give her a home; a woman needs a home, and you've got your life to make your fortune in, anyhow. Remember, if I die sudden the will's—"

"Hush, father," whispered Wesley, excitedly. "Lie down; I must put out the light and get into bed—"

There was another step on the walk and a hasty, sharp rap at the door.

"Wesley, you Wesley, I say, let me in! Why don't you let me in? Do you mean to keep me out in the cold all night?"

She had come back, then. Wesley wondered, as he slipped out of his clothes and gave the lounge another shake up, what had happened to send her home at midnight. Then he struck a match, relighted the still smoking lamp and opened the door.

Mrs. Womack entered, took in the hall, sniffed, and said:

"Coffee! Who's had coffee? You, Wesley? Have you been making coffee after I whipped you about it this very night? Didn't I tell

you you wasn't to drink it? Answer me, sir; have you been making coffee?"

Wesley stopped on his way to the garret, his clothes hanging over his arm, and raising his voice, so that his father might hear and so take his own cue, said, defiantly:

"Yes; I wanted it, and I made it. I drank two whole cups of it."

Which was quite true. His stepmother's face, however, was a study.

### CHAPTER IV. SUSPICIOUS

When Mrs. Womack reached the bedside of Nora O'Bryan she found her groaning and gasping and grunting, as she afterward said, "like a house afire."

"Faith, and it's glad Oi am you have come, Misthress Womack," said Nora. "What with the side of me aching and the poultice a-cooling Oi'll be afther taking the death of me."

"You need a fresh poultice," said Mrs. Womack, promptly. "Where will I find the things to make it? Tell me, if you're able; if you're not, I'll just rummage around and find them myself."

Little Mrs. O'Bryan was never so near choking in her life; but with a desperate effort she pulled herself up in bed and pointed to the cupboard in the corner. In this Mrs. Womack found the meal and mustard that had been previously prepared for the occasion.

"Hadh't I better make it of mustard?" said she.

"Yis," came a whisper from the bedclothes. "Make three, if you please, Misthress Womack; make one for the sole of each foot, and one for the side of me."

"Which side?"

"The right side, ma'm; the pleurisy side."

"Well, I'll have it in a minute. How long will it take to fetch the doctor?" For Mrs. Womack was getting alarmed, so much did the patient seem to be suffering.

"If it's the ould docthor it'll take scant three hours, Misthress Womack. The young one lives nearer, but Oi tould him Oi'd have none of the young greenhorn. Och, the side of me!"

When Mrs. Womack rushed to the bed, plaster in hand, the patient was shaking under the sheets. Shaking? The very bed was trembling, and something suspiciously like a laugh issued from beneath the covers.

"Why," said she, "what's the matter with you?"

Out came Nora's pretty face, all drawn and flushed.

"Faith," said she, "it might be ager, and again it might be fits. Oh, the land! Oi'm afraid it's the fits, Misthress Womack."

"Fits? I don't know what to do for fits."

"Mustard to the soles, ma'm; mustard to the soles. Ah, and that's good, ma'm; and now, ma'm, the poultice to the side of me."

And right there pretty plotting little Nora came very, very near ruining everything by unthoughtedly baring the left side of her.

"Why," said Mrs. Womack, "I thought it was the right side?"

Then the bed and Nora both suddenly stopped shaking; the mistake had brought the plotter up sharply. Something must be done. Mrs. Womack was in one of tossing the poultice in the fire and striking for home alone. But the Irish woman was equal to the occasion. With a great grunt of pain she said:

"Faith, and it's moving, it is, ma'm; it's got around to the other side—the heart side of me." And Mrs. Womack slapped the plaster on that side.

"Now," said she, "what next?"

"If you'd make me a cup of the ginger-tay, ma'm, Oi'm thinking I could swallow it." And while she was swallowing it Mrs. Nora was asking herself how long she could keep up the farce. Suddenly a happy thought struck her.

"It's aisy Oi'm getting now, Misthress Womack," said she, "and if you'll be turning off the light a bit, Oi'm thinking Oi'll be going to slape. And while Oi'm slaping, won't you be giving yourself a bite. Misthress Womack? In the kitchen on the table there's a fesh loaf, ma'm, and the half of a cold turkey, with pickles and sauce, surely. And a bit of the Christmas fruit-cake in the jar in the safe. Oi've been kaping it for the ould man of yours, Misthress Womack; but one of the name's as good as the same, ma'm, so be ating the cake yourself whilst Oi'm taking my rest a bit."

The bill of fare sounded tempting to the watcher, who had trudged over the hill in the brisk January breeze, and who had stirred herself for her sick neighbor in a manner that had whetted her appetite mightily.

Had she but dreamed how that same tempting repast was but a bait to set the trap laid for her the good things rattled off by the nimble Irish tongue might have molded in their dishes for all of Malviny Womack. Moreover, it is a question if Mrs. Nora would ever have arisen from her bed again without getting, at the very least, one remarkably first-class shaking. But she was entirely unsuspecting now, and proceeded to promptly set her foot in the trap, which—also closed upon her.

While she refreshed herself with the turkey and cake Nora lay in bed listening with strained ear, until down the narrow, snow-crusted road came the sound of wheels, followed by the quick tip-tap of a mare's nimble step. When the sounds went by, and Mrs. Nora knew the lawyer and his witnesses had safely made the trip, she lifted herself in bed, slipped the poultries off and waved her hand three times over her head with all her might. She wanted to shout, but knew it wouldn't do. Instead of shouting she lifted her little round, drawn fist and shook it stealthily in the direction of the kitchen. Then she heard Mrs. Womack at the door, and feigned sleep. An hour or two later she awakened from the pretended slumber and began suddenly groaning again.

"Faith, ma'm, and haven't they come yet?" she demanded, when she was able to speak for groaning. "Sure, Oi know Oi heard the gate."

And so she had. But she had also heard wheels coming from the wrong direction, and the acting had been done in order to cover up the sound. Then the door opened, the doctor entered with Mike, and Mrs. O'Bryan's acting was—over? No, indeed; the very worst of it had yet to come. For she knew Mike had told the doctor all about it; she knew that Lawyer Brewer was waiting outside in the doctor's buggy, and she knew that now everybody in the room except Mrs. Womack herself was acting, too.

And when the physician hustled up to the bed with a soothing-powder on a spoon Mrs. O'Bryan was again threatened with the "fits." The doctor looked serious; perhaps he was thinking of the visit just made at the next house over the hill. At any rate, he ordered Mike to put Mrs. Womack into his buggy and send her home; no use, he declared, for her to break herself down with a sick woman whom he was going to put to sleep for at least seven hours.

"And her needing all the strength she's got to nurse the sick at her own house," said he. "So send her home, send her home. It's dark, and there isn't any moon, but my boy can make it all safe; he knows how to drive, and he's been over the road before."

Aye, that he had, not fifteen minutes before; and on that trip he went as a distinguished attorney, and not as a lackey, by any means. And when the door closed upon them, the doctor accompanying them to the gate, little Mrs. Nora sat up in bed and laughed until the bed shook, and even the house itself.

"Oh, the shame of it!" said she; "the shame of it! There's mustard enough in the bed to set it afire; and meal—a peck if there's a dust. And niver a fib have Oi told, saints be praised for it. And now Oi'll be getting into my clothes and fixing the supper before the doctor's 'b'y' gets back from driving the ould cat home. Oh, the blessed b'y! Sure he's to have his supper and his better reward by and by for this night's work."

The lunch was spread when the attorney returned, shaking with the fun of the exploit. In all his life he had never stumbled upon just such a case.

"And I have had to deal with all sorts and classes," said he. "Rascals in high life and rascals in low, and all after the filthy lucre. And I have dealt with the rascals in petticoats fully as often as those in trousers, and have found them a deal harder to handle. But I'm afraid you sent the lady home too soon; I am sure I saw a light as I drove up; it flickered and went out just as we drove up to the gate."

Mrs. O'Bryan threw up her hands in dismay. "The land of the mercy!" she cried. "And Oi promised to kape her until five of the morning, and so I did. That poor b'y! That poor b'y! And all the mustard and the meal gone to naught; and the ager and the pleurisy and the fits—oh, the fits, Mike, the fits!"

But Mike did not respond to her joking; he was thinking that if Mrs. Womack had discovered their trick it would not be a pleasant position that he would occupy, and he half repented having had anything to do with it.

(To be continued.)

## SEVENTY YEARS AGO

The year 1828 was a year of important national achievements "in the paths of peace," and was made notable particularly by the laying of the corner-stone of the Baltimore and Ohio railroad on July 4th, with imposing ceremonies, presided over by Charles Carroll, of Carrollton, one of the signers of the Declaration of Independence. Carroll was at that time eighty-one years of age. The seventieth anniversary of that event was celebrated formally on the Fourth of July, and an interesting prelude to the celebration was the recent removal from the Baltimore and Ohio vault to the Masonic temple in Baltimore of the Masonic emblems and tools used by General Carroll during the ceremonies. They consist of badges, a trowel, a spade, a stone-cutter's hammer, and also the apron worn by Thomas Young Nichol, the working stone-mason, who performed the labor of setting the corner-stone in its place. There was a procession of mechanics, civilians and military, and one of the relics still preserved is a tin cup made by the tin-plate workers who were in the procession on a float. From this modest beginning the Baltimore and Ohio railroad has now increased to a mileage in excess of 2,000, and extends from Baltimore to Chicago. The Hudson River railroad, now a part of the New York Central and Hudson river system, was not completed until twenty-three years later, and at the formal opening of the Erie railroad in 1851 the President of the United States and some of the members of his cabinet attended, so important a matter of public interest was it considered.

Other great events of the year 1828 were the first trip of any locomotive on an American railroad, made in Pennsylvania; the beginning of regular trips by the first steamboat at Boston; the sending thither from Pennsylvania of a ton of anthracite coal, which was rejected as "stone" and unfit for fuel; the establishment of the manufacture of straw-paper in the United States; the making of the first attempt to anneal cast-iron for manufacturing purposes; the publication of a newspaper in the West, partly in the Cherokee Indian language and partly in English, from type loaned by the United States government; the first manufacture of table-cloths in this country, and the publication of the first edition of Webster's dictionary.—New York Sun.

## HOW A LOOKING-GLASS IS MADE

"How is a looking-glass made?" was the question recently put to a large manufacturer of mirrors in New York.

"Well," replied the manufacturer, "most of the glass used in this trade is prepared for us at a molding-factory, and we merely cut, bevel and silver it in our works. All the bevels are cut in the same way; first with sand and water, then on an emery-wheel, and afterward put through several processes to bring back the polish.

"Great improvements have been made in this line of business in the last sixteen years. Formerly it took two or three days from the time work was begun on a mirror before it could be finished. Nowadays we can get the glass in the morning and make it into a looking-glass, perfectly finished and ready for sale, before night. We make all sizes, from the smallest hand-glass of two by four inches to a mirror ten by twenty feet, or even larger, and we have a capacity of turning out three thousand feet a day.

"Not many years ago the backs of mirrors were coated with mercury; now sheets of pure silver are used instead. The old looking-glass reflected sixty or sixty-five per cent of the light that fell upon it; the modern mirror reflects nearly ninety-five per cent. The mercury looking-glass was very liable to rub off; heat and cold also affected it; the quicksilver would crack or melt, and thus the beauty of the glass would be spoiled. None of these dangers threaten the silvered mirror. Besides mirrors, those engaged in this line of business cut a great deal of beveled glass for doors and windows. In fine buildings this is largely taking the place of stained glass."—The Washington Star.

## CHINESE SUPERSTITIONS

No race in the wide world is more controlled by superstitious notions than the Chinese. They enter into every act of a Chinaman's life, and their influence is more lasting than that of his religion. He cannot move hand or foot without their agency, and from the earliest moment of his life down to the last detail in connection with his burial their power and influence are the guiding motives of his acts. All business and family matters are directly controlled by superstitious sentiments, both rich and poor, young and old, being slaves to their force. To the average Chinaman his religion is a mere negative factor in his mode of life, to be followed or disregarded at will; no true son of Han dares to act otherwise than in accordance with the strict precepts of those spiritual powers which directly control his life.

There are some amusing superstitions connected with Chinese entertainments. A dinner party is an ordeal which, once experienced, is never forgotten. It consists of from forty to fifty distinct courses, and occupies the greater portion of a day. During the whole of these repasts, and notwithstanding the endless variety of dishes served, the invited guest re-

tains the same plate throughout. The explanation of this strange custom is an old proverb, which has now become a superstition, that "he who changes plates kills the housewife."

Chinese proverbs explain several of the superstitious notions with regard to women. It is considered unlucky for a woman to mix with the builders of a house or other edifice during its erection; and to avoid any possibility of one straying into the premises all approaches are carefully guarded by watchmen, and a fence is erected around the proposed building as soon as its foundations are laid. The explanation of this is the saying: "Women mix ill with wood, and death lives in the house over whose foundations a woman has walked." There is a similar horror of the fair sex interfering with any public matter of national interest, or in any business transactions where men are concerned. "Women tie knots," says the Chinese proverb; "let them remain at home."

No funeral can take place until astrologers and professional fortune-tellers have been consulted. These unscrupulous diviners decide the place of burial, and in the event of disagreement no final interment can take place. This accounts for the number of unburied coffins which are seen about the country districts in China. Sometimes the coffin is temporarily deposited in a temple, or kept in the house of the heir of the deceased; among the poor, as often as not, it is conveyed to some sheltered spot and covered with a mat. When, in course of time (by aid of additional fees), the diviners can report that all objections to final burial are removed, the funeral takes place amid rejoicing and profane excesses. The mode of propitiation generally prescribed by astrologers is the purchase of some stone or piece of iron, to which an elaborate ritual of prayer and sacrifice is made; or if the client is wealthy, the building of a pagoda is suggested, in connection with which the mercenary fortune-teller doubtless reaps a big commission.

The last species of superstition to which we will call attention forces us to place China among the half-civilized and brutal nations. One of these superstitions is that the soul of a dying person takes possession of the bed and room in which the invalid is lying. To obviate such a curse as this the relatives of the dying person, as soon as they perceive his end approaching, forcibly remove him from his bed and place him, almost naked, upon a board. If by chance a man should expire in his bed, it, together with all the furniture in the room, must be burned and many atonements offered before the room is considered fit for habitation again.

Many strange and inhuman ideas are associated with the illness and death of children. If a child sickens and dies before the age of twelve years its last moments are hastened by the horrible cruelty of its parents. So long as hope is possible the parents do their utmost to save their child, but as soon as the doctors abandon hope the child is stripped naked and placed against the outer door of the house. When the end has come the corpse is thrown out into the street to be picked up by the passing dead-cart. The reason for this brutality is this: If a family loses a child before it has grown to maturity, its parents refuse to regard it as their offspring but rather as some evil spirit who has worked its way into their home in order to bring ruin and misfortune upon it and them.—St. Peter's.

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**Rudyard Kipling's** story of humble heroism, "THE BURNING OF THE 'SARAH SANDS.'" ..

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**J. E. Chamberlin** has written of two soul-stirring episodes of the Spanish War. ..

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**Mary E. Wilkins** has a story entitled "A NEW ENGLAND GIRL SEVENTY YEARS AGO." ..

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## THE AUTUMN LANE

A song for the autumn lane,  
O'erhung by sunnys and pines;  
Where the spider weaves a tremulous skein  
In the mist of silvery lines:  
And the asters gleam  
By the wayside stream,  
And peep through the yellowing vines;  
And the wild mint's prayer  
Floats quaint on the air  
In the shade of the muscadines.

A song for the autumn lane,  
Where the withered thistles sigh  
Like weird old folks that dream in vain  
Of love 'neath a summer sky;  
While sweet scents roam  
Through the thickening gloam—  
Flower souls that will not die—  
And the crickets trill  
A dirge on the hill,  
And the dark wind sobs, "Good-by!"  
—Samuel Minturn Peck.

## QUEER FOODS FROM ABROAD



OF THE more than seventy nationalities that go to make up this great country of ours there is probably not one that does not, at some time during the year, appear on the books of at least one of our ports of entry by reason of immigrants' desires for home dishes. The list of these amounts to many hundreds, and most of the names are unfamiliar to American ears.

The Irish have very little to boast of in their native country from a gastronomic standpoint; yet they import regularly from the "ould sod" pieces of bacon, genuine "murphies" and Irish moss, a peculiar kind of dried seaweed which is obtained upon the western coast of the Emerald isle. This latter is not very attractive in appearance, looking very much like the stuff employed in our seaside resorts for preparing clambakes. Properly cooked, however, it becomes converted into a dark-colored gelatinous mass, and is extremely agreeable to the taste. It is said to be very wholesome for people troubled with weak digestions.

The Swedes and Norwegians import a small cabbage, a seaweed very much like the Irish article, and two or three kinds of bread. Of the latter, one is like the German pumpernickel, the second is like the unleavened bread which the Jews call matzaths, and a third seems to be a hybrid between the two. They are all of them nutritious, and no matter how prepared, quite palatable. Toasted and served with milk, cream or butter they make an enjoyable dish.

The French keep alive their love for "La Patrie" by consuming any amount of Gallic food. The queerest of all their imports is pickled cockcomb, the animal tissue and not the flower being the article. Sometimes it is put up raw, and sometimes it is half cooked and then pickled or spiced. It makes a very brilliant dish, but it is not very fascinating to one unfamiliar with the luxury, being tough, poorly flavored and very suggestive to a piece of leather. A relic of the siege of Paris and the War of the Commune is afforded in French blood-pudding, which is darker, heavier and more homogeneous than the Teutonic blutwurst. The love for this dish is an acquired taste, the impressions produced upon one who eats it for the first time being disagreeable. These puddings are made from the blood of heaves or horses. It can be found on the table of nearly every French restaurant and boarding-house in this country.

The many German provinces are also large exporters of odd foods to the United States. Besides such common products as sauer-kraut, sausages, pickled herrings and soured mackerel they send hares and wild boars in the winter-time, a curious confection called matzapan, which is made of white sugar, cream and blanched almonds, and various kind of bread, pastry and confectionery. Occasionally they send cabbages and potatoes. The former are smaller than our own, but are usually more delicate and finer flavored. The latter are small, round and altogether inferior to our own product. Other foods are goose breasts, which are dried, smoked and pickled; special kinds of ham, for which, it should be added, they charge special prices, and a very delicious mushroom, which is grown in caverns along the Rhine and other river courses.

While very few Spaniards even prior to the past war lived under the Stars and Stripes, yet they imported curious foods in large quantities and great variety from Spain, Cuba and Porto Rico. Few of these are ever found in our stores, nearly everything being consumed in either the household or the few restaurants which the Hispaniolans have established in the past decade. Among these luxuries are Vic, Catalan and Basque sausages, all of which are long, thin and narrow, smoked until they are almost black, dry and hard as a piece of wood, but finer than any other sausage that comes to this country; guayada and guayabada, which are marmalades made from the guava-fruit alone, or from it mixed with other fruit, and boiled down so hard as to justify the Castilian use of the knife and fork when it is served upon the table; red and green peppers, which have been canned in great tin boxes that contain ten and twenty pounds; Andalusian cheese, of which the maternal cows must have dieted upon onions and garlic in order to account for its flavor; preserves of

cocoanut, pineapple, orange, banana and guava, made by boiling the fruit with coarse sugar and then adding to it brandy or strong wine to keep it from fermenting; air-dried beef, which resembles the smoked meat of our own country in appearance, but differs from it altogether in taste and tenderness; smoked and dried sardines, which make an excellent appetizer for dinner or luncheon, and various forms of anchovies, the most pungent of all the finny tribe.

Japan is a heavy shipper of outlandish foods to the New World. It has a practical monopoly of the nests which are used in making birds'-nest soup, which, by the way, when prepared by an American chef, is the most delicious dish of its class in the world. It also catches and dries armies of devil-fish, which are as popular in the East as dried codfish in the West. In fact, the two sea-foods are very much alike in flavor, and differ chiefly in their texture, the flesh of the devil-fish being hard, compact and more like muscle than that of the familiar cod. Tree-mushrooms and scamushrooms are two other famous Japanese edibles that come to us across the Pacific. They resemble mushrooms in their contour and structure, but in nothing else. The tree-mushrooms have a flavor of wood-bark, while the sea-mushroom boils away in cooking, very much as if it were made of marine glue. In fact, it is used in Japan for making vegetable gelatin for thickening stews and soups in very much the same manner as we convert the bladders of sturgeons and other fishes into animal gelatin for a similar purpose. Dried fishes are another important export from the land of the Mikado. Unlike us, the Japanese dry almost every eatable fish from minnows and whitebait up to marine animals as large as the sturgeon and the swordfish, but their drying appears to be conducted upon a different system from our own. When ready for the market their fishes are so dried as to suggest kiln-dried timber. They apply the same process to the lower forms of sea-life and desiccate clams, mussels, oysters, prawns, shrimps, crawfish and crabs until they resemble stone. In this condition the foods will withstand any climate and may be kept in the open air without spoiling for an entire twelvemonth.

China is a close rival to Japan and displays an equal ingenuity in making the delicacies which it exports to the American market. There is a long list of these which can be bought. The more important ones are crystallized limes, dates, figs and watermelon-rind, preserved watermelon-seeds, dried chickens and ducks, which are cleaned and flattened out until they resemble a hemlock shingle; gigantic sardines in oil, where each fish is a foot in length and the box is over a cubic foot in dimension; salted cabbage, of which the leaves, unlike ours, are an inch wide and three or four feet long; sugared flowers, laichee-nuts, matais, which are vegetables like a small potato in appearance, a chestnut in flavor and a radish in crispness; sweet pumpkins, which look like medium-sized watermelons, and are sent over covered with flour or lime, and preserved eggs. These last are preserved by coating them with a mixture of charcoal, lime, clay and glue. There are any number of sweetmeats. They are all made upon the same plan as the ever-popular Canton ginger, being the fruit cleaned, prepared and boiled for many hours in strained honey. Tamarinds, limes and green dates cooked in this manner make as delicious a dish as any Sybarite could desire. In August and September they send over vast numbers of moon-cakes, which are curious little pieces of pastry used in the celebration of the festival of the harvest-moon. In appearance they are like a small pork pie which has been stuffed with a quaint mixture of watermelon-seeds, almonds, raisins, lard, sugar, ginger, flour, rice and spices.

Central America is a valued contributor to our food supplies. It varies its giant export of 2,000,000 bunches of bananas with alligator pears, which bear not the slightest resemblance to either a pear or an alligator; sweet lemons, than which nothing could be more insipid, and an occasional iguana, or edible lizard. This reptile is ugly enough to pose as a model for a medieval dragon, but is, nevertheless, a poor, harmless creature, whose only purpose in life is to be hunted, killed and eaten. The flesh is white, delicate and juicy, being about half way between frogs' legs and green-turtle steaks. It is a great delicacy, and brings a very good price whenever it is offered in the market. Other rare exportations from Central America are the queer fruits known as sapodillas, prickly pears and star apples.

Even small countries contribute to the long list of delicacies. Judea sends at intervals what are called "stichies," small cakes in which cinnamon and cloves run rampant; Mexico forwards tamalas; Canada West catches bullfrogs whose legs weigh over a pound, while New Brunswick and Nova Scotia capture colossal lobsters which weigh sometimes twenty-five pounds. All are eaten in the "land of the free and the home of the brave," and in return a goodly river of gold and silver flows back to the countries which minister to the appetite of our stranger brethren.—Philadelphia Times.

"The more I post up on 'American Women,'" writes Mr. H. B. Hester, Monticello, Ohio, "the better I like it. It is my purpose to handle it exclusively this year, and am confident of doing a large business. As an old agent I know what the people want, and 'American Women' fills the bill."

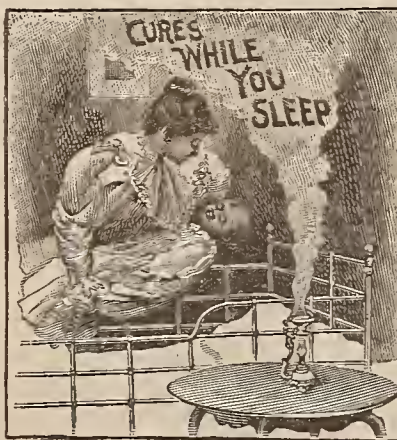
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## THE BEST WASHING POWDER



An Oregon farmer, living in Tidewater, has for a long time endured a most exasperating state of things. "For three or four years," he says, "I have been much troubled with sick headache and have tried almost every kind of pill and medicine, including hot water cure. I saw an advertisement of Ripans Tabules and knowing their ingredients, thought I would try them. I must say they acted immediately and relieved my head at once. I am forty years of age, and when the attacks came on every few days in the summer I had to stop work, but the Tabules would stop the pain in about twenty minutes. I have advised others to take them."

A new style packet containing TEN RIPANS TABULES in a paper carton (without glass) is now for sale at some drug stores—FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (20 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—or a single carton (TEN TABULES) will be sent for five cents.



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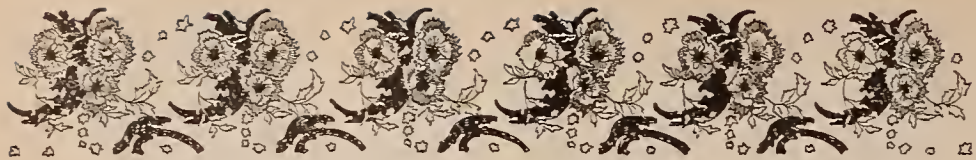
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## LOOKING INTO A SHEET OF PAPER

**D**URING the Revolutionary War paper could scarcely be bought at any price, and upon entering Philadelphia, in 1788, the Continental army was so greatly in need of cartridge-paper that soldiers were ordered to search the houses for it. In a house once occupied by Franklin fortunately were found 2,500 copies of an old sermon that was entitled "Defensive War." These sermons were at once made into cartridges and used as a practical application of defensive war at Monmouth.

After the war both rags and paper continued to be very scarce, and sometimes important records could not be printed at all because paper was not to be had for love or money. It was not uncommon for paper manufactures at this time to put moving appeals in print, like the following sent out by Zenas Crane:

### "AMERICANS!

Encourage your own manufactures,  
and they will improve.  
Ladies, save your RAGS.

The subscribers have it in contemplation to erect a paper-mill in Dalton the ensuing spring—and every woman who has the good of her country and the interests of her own family at heart will patronize them by saving her rags and sending them to the manufacture, for which the subscribers will pay a generous price."

In time whole villages and even banking institutions grew out of this paper-making

paper is unequaled in the world for its purity and uniformity of texture.

The making of a sheet of paper is a most interesting process. Taking a seat in the rag-room we find ourselves in company with strange neighbors, for the heavy bales which are brought in disclose rags from Russia, Italy and Turkey, from the banks of the Elbe and the shores of the Baltic, as well as from the towns and cities of our own land. Here they are heaped together in dirt and confusion, to be cut into strips over a sharp knife by the rag-woman, and sorted and thrown into the duster.

When they have been beaten and tossed about sufficiently to shake out the dust they are boiled in lime-water, after which they are put into washing-machines and thoroughly washed in streams and streams of the purest and softest water. Then they are ground into bits. These bits are now bleached with chemicals until they are as white as snow, and after draining a week or so are forked out and carried to the beating-engines. It is during the beating process that the coloring is added. Great care and skill are needed in the coloring, because it is so very difficult to determine from the pulp how the paper will look when it is dry.

The "half stuff," as it is called, now journeys to a great cistern in the basement, where a machine, called the "agitator," keeps it in constant motion to prevent any particles from settling to the bottom. From

place; then to smooth out every wrinkle they are crushed under hundreds of tons weight, and at last cut into small sheets by a machine which cuts through 1,500 thicknesses of paper as if going through air. After this, if meant to be particularly fine, they are rolled under a heavy brass roller, called a "calendar." Jogged again, and folded and pressed, they are then sorted over, and any sheet having the least wrinkle or spot or blemish is thrown out of the package, which is marked extra superfine and sent to the stationer.

## THE SCHOOL LUNCH-BASKET

**W**HAT goes in it is of more importance than the basket itself, but the best of cookies will have an added flavor if there is a touch of refinement about the way they are put up. It is a frequent complaint among mothers that the children have no appetite for the school dinner, and no doubt the hasty "slapping together" of thick slices of bread and preserves and a hunk or two of meat in uninviting fashion is at the root of the matter. It is of the highest importance that the



So the poor rags have been cut and torn and bruised and beaten, have been washed and strained and interwoven and jogged and pressed until, like a pure life coming out of great tribulation, they have grown into this fair sheet.

Looking further into this sheet we may see how skilled men have patiently toiled; how they have given the best years of their lives, and expended fortune, strength and intellect, and died poor and in obscurity, that perfection might be attained in this pure and spotless paper which now lies at hand waiting to carry some loving message to a friend.

Shall we not touch it reverently, and with careful hands give it the kindly, generous, sincere word which will enrich our friend's life?

FRANCES BENNETT CALLAWAY.

## LILIES AND VIOLETS

**T**HE housekeeper is never disappointed by the gift of any kind of household or table linen. It is dear to every woman's heart. One little

woman I know looks over her box of linen table-centers, doilies and lunch-cloths embroidered by loving hands with as much pleasure as another would enjoy a gallery of fine pictures. To be able to paint with the needle is really as much of an art as to be able to paint with the brush.

Daintiness and deftness with the needle are requisite in all embroidery, and with a very few lessons from experts you can soon acquire a knowledge which will be a pleasure to you always. Embroidery never goes out of style, and is a handiwork that is always appreciated if well done. It is an art that can always be utilized. If in a small place there is only one woman who can do it well, it will pay the rest to form a class and learn the right way to do it, for in this, as in every other art, there is only one right way.

The two pieces illustrated are lovely specimens of their kind. One is a square lunch-cloth embroidered in wreaths of blue violets, though the scheme could well be carried out in white, with the palest of lavender shading, for a gift to a bride, if one wished to do so. The hem is turned on the wrong side and buttonholed closely on the right side with heavy white silk. In the shaded violet colors it is as pretty a cloth as I have seen in some time. The round one is quite large, being what is called the banquet size. The decoration is large yellow lilies worked in heavy floss of two shades of yellow. The leaves are only half worked. The two lines around the edge are in two shades of golden brown. It must be measured as a square first, the depth of the fringe marked, and the upper edge worked in heavy white floss. The stems of the flowers and buds have a few stitches of the yellow silk carried through the green. Both are very desirable patterns to have.

E. B. R.



two teaspoonfuls. of lard and butter, mixed, two even teaspoonfuls of soda dissolved in two thirds of a cupful of boiling water, two tablespoonfuls of ginger and flour enough to roll out thin. Bake a light brown in a hot oven. These will keep a long time, and are very delicious when properly made.

**GINGERBREAD.**—One cupful of molasses, one tablespoonful of ginger, one salt-spoonful of salt, two tablespoonfuls of butter,



industry, and in one year, 1845, the paper-mills paid out for rags alone six thousand millions of dollars.

It being difficult to obtain rags enough, many other materials were experimented upon, and it is claimed that more than a hundred of them yield a fair amount of paper, among them being leaves, straw, moss, thistles, hollyhocks and hornets' nests.

In this matter of paper-making we owe much to the valuable lesson learned from our humble and patient little neighbor, the wasp. It was in 1719 that Reaumur, observing how a wasp makes its nest out of wood, gave paper-makers the hint, and to-day over twenty kinds of forest-trees are extensively used in the process of paper-making.

We cannot help looking upon a sheet of writing-paper with respect when we consider that it is the result of the inventions and improvements of eight hundred years, and that the making of it is considered one of the most delicate and perfect operations known to machinists to-day. We have in our country 1,200 mills, and around one of these mills in Pennsylvania a guard of soldiers is kept night and day. This is where the paper used for United States money is made. Our exports are increasing rapidly, owing to the fact that American

this cistern it is pumped into another box, reduced to the consistency of buttermilk, and strained, after which it meets another agitator, and finally is poured in a miniature cataract over a wire-woven cloth, where a small roller, called the "dandy," stamps the name in the paper, which is known as the water-mark. Next comes the tedious process of drying through "wet felts" and "dry felts" and press-rollers and heated cylinders. When the sheets of paper are at last dry they are soft, like blotting-paper, with so many spaces between the fibers that the ink runs in every direction.

The paper after being cut is now "sized" by being dipped in gelatin, and to give it a smooth, glossy, ivory finish it is filled with various substances, such as casein, from many gallons of cow's milk, or fine china-clay or a material that is called "pearl hardening."

Finally it is taken to the drying-loft, where the sheets are hung on poles supported by racks. This room is heated by steam-pipes and splendidly ventilated, and the drying paper stretches itself out and takes a breath and is comfortable. But the end is not yet.

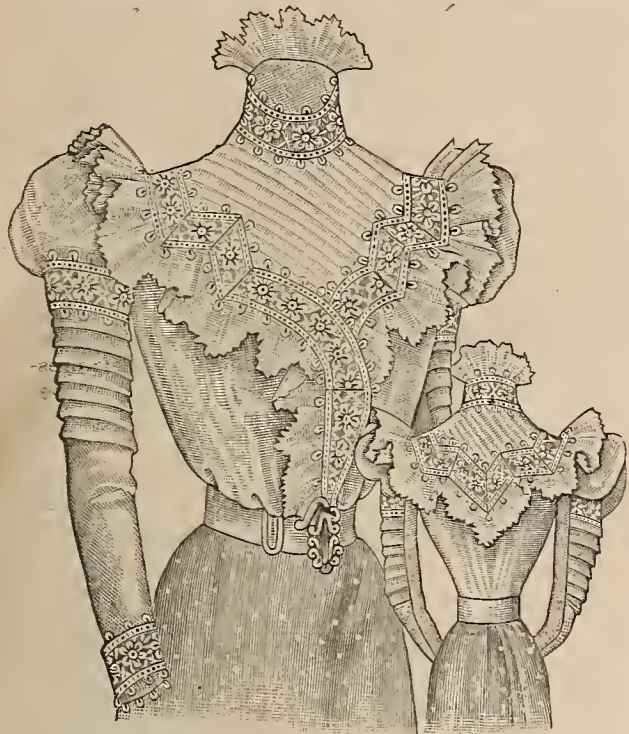
Taken down from the loft, the sheets are "jogged" by striking a handful at a time on a table, to bring them all into proper

one half cupful of boiling water, one teaspoonful of soda and two cupfuls of flour. Add ginger, soda and salt to the molasses, then the butter, which has softened near the fire; beat well, pour in the boiling water, mix, add the flour, and beat well again. Bake in a shallow pan for twenty minutes or until the cake leaves the side of the pan.

**FAVORITE CAKE.**—One egg, one tablespoonful (scant) of butter and one cupful of sugar. Beat well together, add one scant cupful of milk, two cupfuls of flour, one teaspoonful of baking-powder and a dust of cinnamon in the batter for flavoring. This makes two nice layers in jelly-cake tins, but is to be used without any filling.

**SPONGE-CAKE.**—One scant cupful of sugar, one cupful of flour, one teaspoonful of baking-powder, two tablespoonfuls of cold water flavored with vanilla; add the yolks of three eggs to the sugar, and beat well, then the sifted flour and baking-powder; mix gently, and add water, then the stiffly beaten whites in a sort of lift-up-and-fold-over motion. Bake in a moderate oven about twenty minutes. To attain its full excellence this should be baked in a sheet, never in a loaf, and lightly pulled apart as needed.

Empty vaseline-bottles will carry syrup or strained honey conveniently, and a supply of salt can be kept in one at school. A custard baked in cups affords a pleasant change, and there are sandwiches innumerable. They may be made of chopped fruits, fresh, canned or preserved, cold fish and meats, pickles, baked or cold Lima beans; even cold sausage is not to be despised. A mustard dressing for these can be made as follows, and kept on hand:



One tablespoonful each of flour, mustard and salt, two tablespoonfuls of sugar and one pint of vinegar; mix, and cook until thick.

MARY M. WILLARD.

#### PLANTS FROM FALL-SOWN SEEDS

FROM plants sown in the fall the best pansies are to be obtained. Plants from fall-sown seed will be strong and vigorous in April, if care is taken to protect them during the winter, and will begin to flower by the time spring-sown plants are getting their second and third set of leaves, and will continue to bloom all summer, while the others will not come into bloom before the middle of the season, and their flowers will be small and poor until the cool weather of fall sets in.

Seed should be sown at once. Make the bed light and mellow and rich. When the plants come up, if they are too thick thin them out, planting about a foot apart. Keep the weeds down and stir the soil about them occasionally. Pansies like a cool and airy location. A moist one, and one about which the air does not circulate freely, does not suit them at all, and if you plant them there the plants will be very likely to mildew, and such plants seldom amount to much.

In the latter part of November, or whenever it seems assured that cold weather has really set in, cover the beds. But do not cover them as some do, with litter or manure which will pack down in a compact mass when the snow comes on top of it, which excludes the air from about the plants. Nothing is more harmful to the pansy. We have few plants which require more air at all times of the year, and a thick, heavy cover during the winter, under the snow, will so weaken them that

they seldom recover from the effect of what is given under the mistaken idea that a kindness is being done them. I find nothing so good as a winter cover as branches of evergreens. These hold the snow up and do not pack down firmly under the weight they have upon them, and, in consequence, there is always a good circulation of air about the plants.

Some persons think that fall-planting of shrubs and vines is not advisable, but I do not agree with them, if care is taken in doing the work. If you are careful to lift them with-out disturbing the roots very much, at any time after the ripening of the leaves, and plant them in mellow soil which can be packed down firmly about the roots, I have found that they almost always can be depended upon to come through the winter in first-rate condition, and they start as early in the spring as most will which were transplanted the spring before. The ground is generally in a much better condition for doing this kind of work through September and October than it is in spring until quite late, and the plants can be handled to better advantage. I am inclined to think that one reason why fall-set plants do better than spring-set ones, when they come out all right in spring, is because the work has been better done.

If transplanting is done in the fall the roots will have several weeks of warm weather in which to establish themselves in their new location, and an examination of the plants that were set out in September along the last of November will show you that a great many small roots have already done so.

G. H. DIERHOLD.

#### GOWNS AND WAISTS



WHILE plain skirts are always desirable to those who must do their dresses over or make them last more than one season, yet the flared skirt or the Dewey flounce will be a great favorite through the coming season. With a skirt of plain color a blouse of plaid

can be worn, made with revers and worn with a belt. If a jacket is desired, a vest-waist is very desirable, and one can have two of these, one light and one dark. A military effect is much followed by some dressers. It can be softened by a jabot effect of lace. Pretty house dress-waists are made with tucked yokes of the goods or of a harmonizing silk. The tops of the sleeves are also tucked. Fine knife-plaitings are used for the trimmings.

Even the little folks are not forgotten. The dainty gowns illustrated are brought out in pretty wools, with lace and ribbon trimmings. Silk embroidery is also employed upon delicate fabrics.

Military effects in everything will be the feature of the season. A beautiful coat was seen, of military-blue cloth, piped with red and trimmed with large brass buttons, with a flag on top of each.

Braid will be put on all dresses in military effect in the heavy braid, and used in connection with buttons put on in groups.

CHRISTIE IRVING.

#### PURE MILK



HAVING occasion for a short time to buy milk, I found it necessary to change my supply three times before securing milk untainted with barn-yard odors. Is it a hopeless desire that we shall some day see our domestic animals once more in charge of the daughters of the family? The Jersey cow in its native home is rarely cared for, and more rarely milked, by any one of the male sex.

It may not be known to all of my readers that the earliest meaning of the word daughter was milker. It is an old word, one of the oldest in the world. Traced

back to its origin, in India, it had almost the same form as at present, and indicated that the girls of the family had for their specific office to take care of the milk-givers.

Are we aware how far the question of pure milk affects the health of the household? Apart from the detestable associ-



ations connected with milk tainted by the unclean teats, and the unwashed hands of the hired man, it is impossible to overestimate the injury arising from these things in the way of poisoning the family. One of our most celebrated New York physicians says that he has traced more sickness to impure milk than to any other single source. Let our farmers think of these things and inaugurate a reform.

But it will be impossible to work out our salvation on this line until we have worked out the salvation of the cattle on other lines. I shall never forget, before my marriage, visiting a Quaker barn-yard. It was peace and love and good-will which reigned in the house and extended to the cattle. Every cow was a picture of happiness and content. The barn-yard was well shaded and provided with just as pure water as the house. The old Quaker mother said to me, "Thee will find that we love peace among our cattle, and thee will find they love it, too." Give your animals plenty of shade and pure water and kind handling.

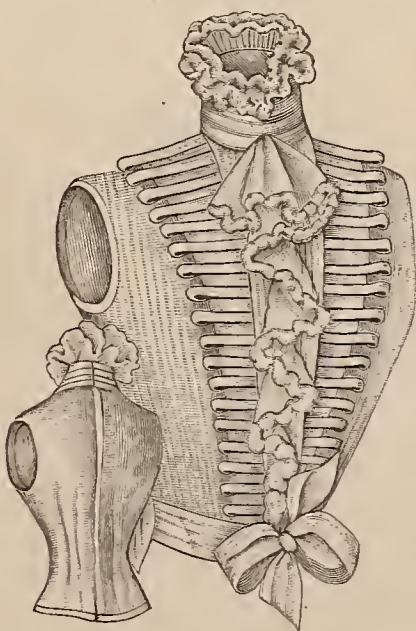
LUCY POWELL.

#### SALT FOR CLEANING FLOORS



HOSE who have to clean unpainted floors in dining-room or kitchen, and have but little strength with which to do it, may find the following method helpful. It was told me by a woman who keeps summer boarders, and who, by following this plan, had only to mop her dining-room but once in two or three weeks, always to the utter surprise of the new hired girl.

Take one or two cupfuls of coarse salt, free from lumps, and sprinkle over the room; then sweep as usual—but in one direction only; then sweep again from the



opposite direction. It is well to dampen the broom slightly occasionally while sweeping. Of course, this method will not remove grease-spots, but it will remove dust as by magic.

A. A. CRAWFORD.

In the worst colds, where there is pain, constriction of the bronchial tubes, and spasms of the muscles of the chest, Jayne's Expectant will afford almost immediate relief, and soon effect a permanent cure.

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Showing the Relative Positions of its Various Parts.

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only the outer husk or woody, innutritious part of the wheat kernel is discarded. There is no injury to the grain, chemically or otherwise. This is the only flour in the world containing all the food elements in wheat reduced to an even fineness. It is an invaluable remedy for dyspepsia, indigestion and constipation—no matter of how long standing. If your grocer does not keep it, have him order some for you or send us his name and your order—we will see that you are supplied. Avoid substitutes.

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Booklet and key to above illustration mailed free on request.

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The FARM AND FIRESIDE has made special arrangements with the publishers to give the book free to any of its readers who send a two-cent stamp for postage to Wells, Richardson & Co., Dept. Q1, Burlington, Vt. The edition is limited, and any one who wants the book should send at once.

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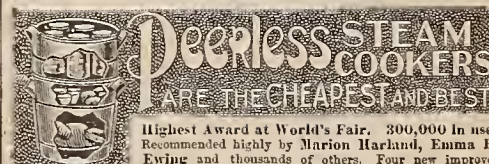


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**Examination Free.** Cut this ad. out and send to us; SEND NO MONEY. State your height and weight, number of inches around body at Bust and Neck, whether Black or Blue is wanted, and we will send you this cape by express C. O. D., subject to examination. You can examine and try it on at your nearest express office, and if found exactly as represented and the best value you ever saw or heard of, and far cheaper than any other house can offer, pay the express agent OUR SPECIAL PRICE, \$2.75, and express charges.

**THIS CAPE** is the very latest style for Fall and Winter, made of Black

or Blue all-wool genuine Clayton Beaver Cloth, 23 inches long, very full sweep, 12-inch upper cape and large storm collar, beautifully edged with fine Black Baltic Seal Fur, trimmed with one row wide and two rows narrow Mohair braid. This garment is fine tailor-made throughout and equal to capes that sell at more than double our price. Write for our free Cloak Catalogue of everything in women's and children's wear. Address, SEARS, ROEBUCK & CO. CHICAGO.



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We send our monthly 16-page, 48-col. paper devoted to Stories, Home Decorations, Fashions, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents. If you send the names and addresses of six of your friends, WOMAN'S FARM JOURNAL, 4311 Evans Ave., Saint Louis, Mo.

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**15 MINUTE TOP.** Spins nearly 15 minutes. Cannot get out of order. By mail 12c.; 1 doz. 75c. J. Lee, Omaha Bldg., Chicago.



## A DAINY DOILY IN CROCHET

**ABBREVIATIONS.**—Ch, chain; tr, treble; st, stitch; sh, shell; s c, single crochet.

One half spool of Barbour's No. 90 linen thread and a fine steel crochet-needle are required.

First row—Ch 3; join.

Second row—Ch 3, 16 tr in ring.

Third row—Ch 3, 2 tr in each tr of second row.

Fourth row—Ch 3, 2 tr in each tr of third row.

Fifth row—Ch 3, \* tr in each of the next 7 tr, 2 tr in next tr; repeat.

Sixth row—Ch 3, tr into tr; this row begins with ch 2, 2 tr in same st, \* ch 2, 2 tr in fifth tr of fifth row, ch 2, 2 tr in same st; repeat. There will be 16 shells.

Seventh row—\* 3 tr, 2 ch, 3 tr in loop of first sh, ch 2, sh on sh; repeat.

Eighth row—Sh on sh, \* ch 1, 1 tr in space between sh, ch 1, sh on sh, ch 2, sh on sh; repeat.

Ninth row—Same as eighth row.

Tenth row—\* Sh on sh, ch 2, tr on tr, ch 2, sh on sh, ch 2; repeat.

Eleventh row—\* Sh on sh, ch 1, tr in first space, ch 1, tr in second space, ch 1, sh on sh, ch 2; repeat.

Twelfth row—Same as eleventh row.

Thirteenth row—\* Sh on sh, ch 1, tr on tr, ch 1, tr on tr, ch 1, sh on sh, ch 1, tr in tr, ch 2; repeat.

Fourteenth row—Sh on sh, ch 1, tr in tr, ch 2, tr in tr, ch 1, sh on sh, ch 2, tr in tr, ch 2; repeat.

Fifteenth row—\* Sh on sh, ch 1, tr in tr, ch 2, tr in tr, ch 1, sh on sh, ch 2, tr in space, ch 2, tr in space; repeat.

Sixteenth row—\* Sh on sh, ch 1, tr in center space, ch 1, sh on sh, ch 2, tr in space, ch 2, tr in space, ch 2; repeat.

Seventeenth row—\* Sh on sh, \* ch 1, tr in tr, ch 1, sh on sh, ch 2, tr in space, repeat to sh, sh on sh; repeat from first \*.

Eighteenth row—Sh on sh, \* sh on sh, \* ch 3, tr in space, repeat to sh, sh on sh; repeat from first \*.

Nineteenth row—Same as eighteenth row.

Twentieth row—Ch 3, lap space at top of the 2 sh so as to put sh on both spaces at once, 2 tr in double space, ch 2, 3 tr in same double space, \* ch 3, tr in space, repeat to sh, then work sh as before into double space; repeat.

Twenty-first row—Work back to space in sh with s c, ch 7, tr in space, \* ch 4, tr in next space; repeat.

**THE EDGE.**—Ch 7, fasten into fourth tr, repeat this until there are four spaces, turn and work into the first three spaces 16 half trs, and 8 half trs into the fourth space.

Half trs are worked as follows: Put thread over needle as for tr, but draw off all three loops at once. Turn, ch 7, fasten in center of second loop, ch 7, fasten in center of third loop, ch 7, fasten in center of last loop. Turn, work 16 half trs into the first two loops and 8 half trs into the last loop, turn, ch 7, fasten into top of second loop, ch 7, fasten into top of last loop, turn, work 16 half trs into first loop, and 8 half trs into last loop, turn, ch 7, fasten into top of loop, turn, work 16 half trs into loop, and 8 half trs into the loops that are only half filled; repeat around doily. There should be 16 of these points.

MAY LONARD.

### HOW TO RAISE HYACINTHS

My shelf-ful of bright-hued hyacinths was being admired by a lady. The time was January, cold and bleak, and the brightness of the gay blossoms was in striking contrast with the world outside.

"What," asked the lady, "do you consider the prime requisite in bulb culture?"

Without hesitating I replied: "The prime requisite is to give the bulbs a long, uninterrupted rest after planting, so that they may have ample time to develop a strong, healthy root growth, as everything depends upon the roots. If one's bulbs

are first-class in every respect, and receive perfect treatment otherwise than giving them their necessary rest for growing roots, they will not prove so satisfactory as second-class bulbs, which have been in dark confinement for weeks and have grown a good system of roots.

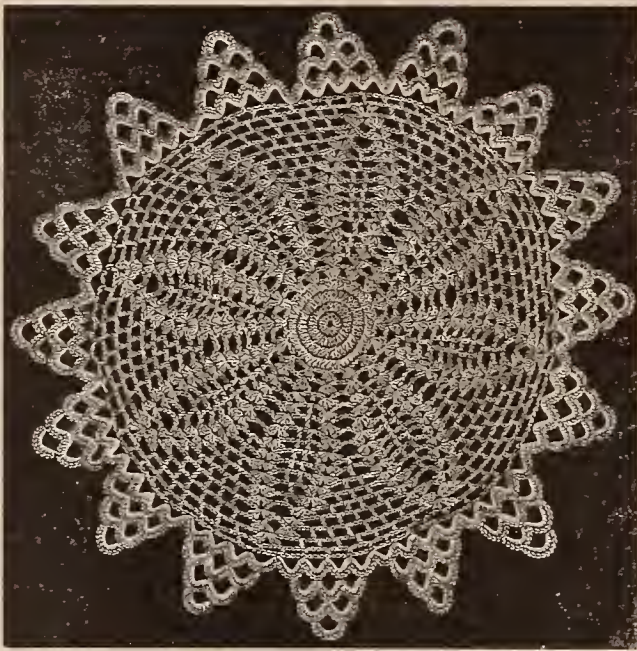
"Now, that dish of hyacinths," I continued, pointing to a pot of rich, glowing, dark-red flowers, "was kept in my dark closet—well, how long, do you suppose?"

"Oh, six or eight weeks, perhaps," returned the lady.

"No; three whole months, lacking a few days, and see what a beauty it is. The name of the variety is Amy, and the bulb has borne one medium spike of bloom previous to the two it now bears. These are about eight inches high and as large and compact as could be desired. It is an ideal hyacinth, and others will be equally beautiful that have not been brought to the light yet. I bring out some of my bulbs after they have been kept in the cellar but six weeks, and some of them will remain in the dark four months."

"But how do you know just when to bring them to your window-garden?" the lady asked.

"There are two ways of telling, neither strictly infallible. First, by the color of the leaves. When they are light green—not yellow—even in the dark, they are ready for the darkest corner of one's window-garden at first, afterward the sunniest spot it affords. Way number two is by their height. When about two inches high



it is generally safe to remove them, but not always. One must use one's common sense and let his bulbs remain in the dark closet or cellar for six weeks anyway, until he is absolutely sure a firm, strong growth of roots has been attained."—September Vick's Magazine.

### THREE PIE RECIPES

**LEMON PIE.**—Moisten one heaping tablespoonful of corn-starch with a little water, then add one cupful of boiling water; stir over the fire until it boils and cooks the corn-starch, then add one teaspoonful of butter and one cupful of sugar. Take from the fire, and when cool add one well-beaten egg and the juice and the grated rind of one lemon. If I want frosting on the pie I beat the yolks of two eggs and add to the corn-starch, then beat the whites with two tablespoonfuls of sugar until very stiff. Bake the pie, and let it cool before putting on the frosting, then return to the oven, and brown.

**CIDER PIE.**—Two thirds of a cupful of boiled cider, two thirds of a cupful of sugar, one egg, two tablespoonfuls of flour and one tablespoonful of lemon extract. Add cold water enough to fill the pie.

**CHOCOLATE PIE.**—Grate four tablespoonfuls of chocolate, mix with one pint of boiling water, add the yolks of two eggs, two tablespoonfuls of corn-starch, with a teaspoonful of sugar, and cook until thick. Flavor with vanilla. Beat the whites of the two eggs and two tablespoonfuls of sugar until stiff, and put on pie after it has been baked and cooled; then return to the oven, and brown.

MRS. H. S. CLARK.

### HINTS FROM THE METROPOLIS

**SKIRTS** this season will present a much more dressy appearance than last, even the plainest of them having some sort of a flounce effect. Invariably, however, they must fit well over the hips, leaving all the "flare" of the skirt to start from the knees downward. The plain circular flounce, the same width all around, is exceedingly popular, but perhaps not more so than the flounce which is wide at the front, narrowing toward the back, nor even the one which is narrow at the front, widening toward the back. While the circular flounce is the thing, there will be no unpleasant sameness to gowns, since this style of flounce is capable of so many stylish variations.

Velvet ribbon will be used very largely this season in the trimming of gowns—skirts as well as waists, several widths being used on the same skirt.

The veils nowadays could scarcely be more "spotted" or more injurious to the eyes. Yet they are not disfiguring to all complexions, when the proper shades are chosen.

The jackets this fall are naturally quite military in effect, tight-fitting and braided, the cut of the sleeves giving a square effect to the shoulders. Those which are less military are much in the style of the double-breasted reefer of last year, with the exception that they are not square cut, but have the fronts curved at the bottom.

EMMA LOUISE HAUCK ROWE.

### PRESERVED PUMPKIN-CHIPS

**PRESERVED** pumpkin-chips are much prized by the town housewife, but seldom seen in the country. Try a little. Choose the deepest-colored pumpkin obtainable, pare, and cut round and round in rings one inch thick; slice the rings crosswise into thin chips, and weigh. For every five pounds of fruit allow an equal weight of granulated sugar and one dozen lemons. If you use a lemon-squeezer pare half the lemons. Spread a layer of sugar on platters or plates, then a layer of chips, than one of sugar. When all are covered sprinkle the lemon-juice evenly over the top, and stand in a cool place over night. In the morning drain off the syrup into a porcelain-lined or granite kettle, slowly bring to a boil, and skim; then add the fruit, and simmer gently and steadily for one hour (skimming as often as any white scum rises), or until the chips are tender and transparent. Press the fruit under the syrup often, but do not stir round and round, as the beauty of the preserve depends on the chips remaining whole. When sufficiently cooked skim the fruit out into jelly-glasses or bowls; dip the boiling syrup into a pitcher that has been heated, and holding a square of cheese-cloth over the spout, strain the syrup over the chips. When cold cover with paraffin-wax, and keep in a cool, dry place.

KATHERINE B. JOHNSON.

### FOR THE WILD-FLOWER GARDEN AND HERBARIUM

**WHILE** planning a wild-flower garden for next spring bear it in mind now and secure many of the dainty fall bloomers for it. A bed of hardy wild flowers is an addition to any large garden, but to make it complete the spring, midsummer and fall flowers should all be included; and they should be marked for transplanting, one by one, as their beauties are noted during the blooming period. We must, therefore, keep our eyes wide open now, during the wealth of fall bloom. This is a good time, too, to secure small specimens of hardy ferns.

And during the delightful autumn rambles after the "wood treasures" it will be interesting to collect native wild flowers, etc., for the herbarium. Press the finest specimens, and when nicely arranged in a portfolio, with the species, the genus and the name correctly marked (with perhaps a little memento of the good times enjoyed), this will not only prove interesting, but vastly instructive as well.

S. W. H.

### LINEN NAPKIN-RINGS

**NAPKIN-RINGS** are pretty and inexpensive when simply made of bands of linen embroidered with violets in colored silks. These are neatly stitched to other strips, and fastened with button and buttonhole.

F. B. C.

# FOR YOU

**FOR** that sour stomach use Stuart's Dyspepsia Tablets, because they digest the food before it has time to sour, ferment and poison the blood.

**FOR** loss of appetite take Stuart's Dyspepsia Tablets, because food promptly digested creates a natural desire for MORE.

**FOR** loss of flesh, use Stuart's Dyspepsia Tablets; they increase flesh in the only common sense way, that is, by digesting flesh-forming food, and assisting the weak stomach in disposing of it.

**FOR** gas in stomach and bowels, causing distress, belching and headaches, use Stuart's Dyspepsia Tablets; always indicated in such cases.

**FOR** palpitation of the heart, use Stuart's Dyspepsia Tablets, because this symptom in nine out of ten cases is caused from a disordered stomach.

**FOR** impure blood use Stuart's Dyspepsia Tablets; pure blood can only result from wholesome food thoroughly digested.

**FOR** every form of weak digestion and stomach trouble (except cancer of the stomach) Stuart's Dyspepsia Tablets is the safest, most natural, most successful cure. No patent medicine, but composed of digestive acids, pepsin, bismuth, Golden Seal and similar valuable stomach remedies.

For sale by druggists at 50c for full size package, or by mail from Stuart Co., Marshall, Mich. Kindly ask your druggist first.

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Our New Fall Catalogue, superbly illustrated in actual colors, and containing 60 of the latest and best carpet designs ever offered, is now ready for distribution, and will be mailed free to any address. Here are a few specimen prices:

	Per Yard
Heavy Union Ingrains. Worth 50c.	35c.
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### OUR 1899 MACKINTOSH

**SEND NO MONEY.** cut this ad. out and send to us, state your height and weight, bust measure, length of garment from collar down back to waist line, and waist line to bottom of skirt; state color wanted, and we will send you this mackintosh by express C. O. D., subject to examination; examine and try it on at your nearest express office, and if found exactly as represented and by far the greatest value you ever saw or heard of, pay your express agent **OUR SPECIAL OFFER PRICE, \$2.95**, and express charges.

**THIS MACKINTOSH** is made of **BLACK or BLUE** genuine **RAINLEY** double texture, waterproof **SERGE CLOTH**, with fancy plaid lining, velvet collar, double detachable cape, extra full sweep cape and skirt, guaranteed latest style and finest tailor-made. **FOR FREE CLOTH SAMPLES** of everything in ladies' mackintoshes, write for Free Sample Book No. 85C. Address **SEARS, ROEBUCK & CO. (Inc.), CHICAGO, ILL.**

## Reversible LINENE Collars and Cuffs.

Most economical and convenient. Made of fine cloth in fashionable styles, and exactly resemble linen goods. Turn down styles are reversible.

**No Laundry Work** When soiled discard. Ten Collars or five pairs of Cuffs, 25c. Send 6c. in stamps for sample collar and pair of cuffs. Name size and style.

**REVERSIBLE COLLAR CO., DEPT. C, BOSTON.**

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**ANGEL'S WHISPER**—Beautiful large picture. Colored. Sells quick at 25c. Sample 12c; 9 for \$1.00. J. Lee, Omaha Bldg, Chicago.

### GRANDMOTHER'S HANDS

Crippled and bent and marked with toil,  
Grandmother's hands are busy all day;  
They sew on the buttons and patch up the holes,  
They take up the toys and put them away.  
  
They smooth the pillow for Johnnie's head;  
They find a cure for his every pain;  
They cover his kite and mend his sled,  
And they tie the string to his railroad-train.  
  
They find the sweets that make him glad;  
They sprinkle with sunshine all of his cares;  
They spank him, too, when Johnnie is bad,  
Then dry again his bitter tears.

In years to come, when Johnnie's feet  
Tread cheerless paths of other lands,  
Deep in his manly heart he'll bless  
Both spanks and gifts of those dear old hands.

—Atlanta Journal.

### WINTER FLOWERS

**FALL SEED-SOWING.**—For a wealth of brilliant bloom in the early spring sow a bed of Shirley poppies in October or even in November and they will be ready to bloom next May. Pansies for early flowering should also be sown in the fall, and other varieties of hardy and half-hardy annuals will produce thrifty plants and early blossoms if sown now instead of in the spring, and slightly protected during the winter.

Many of the summer pinks, Phlox drummondii, etc., that have had the blossoms picked as soon as faded all summer, to prevent the ripening of the seed from exhausting the plants, may now be allowed to ripen a few seeds, selecting only the choicest blossoms to form the seed for next-year's flowers. Allow these seed-pods to ripen and burst and self-sow, and thrifty seedlings will start very early next spring and bloom long before the house-grown seedlings.

**CANDIED ROSES.**—The thought of eating crystallized or candied rose-petals may seem an absurdity to one who has never tried these dainty confections, but just wait until you give them a trial, following the recipe sent from southern California: Spread the rose-petals on paper, and dry them for several hours. Make a syrup of half a pound of sugar and less than half a pint of water. Boil until it threads or spins when poured from a spoon. Set the boiler, after removing it from the fire, in a bowl of ice-water until the syrup begins to crystallize. Then dip the petals, a few at a time, in the syrup, and with a pair of wire tongs take them out and place on oil-paper to dry or harden. When partially dry, sprinkle on both sides with fine pulverized sugar, and when served at the five-o'clock tea see if it is not the general verdict that candied rose-petals make the daintiest confections imaginable.

**THE SPOTTED CALLA.**—It should be remembered that the spotted calla is a summer bloomer, and should not be potted for winter display. Store the bulb in the cellar this fall, or allow it to remain in the pot of dry soil, and replant it outside next spring. It is scarcely worth while to allow those that have finished their summer blooming to ripen their seed. It is said that the seeds are excessively slow in ripening, and germinate with difficulty unless grown under intense tropical conditions. It is best to cut the bloom away as soon as it fades and the spathe begins to thicken. If grown in a moist, rich place this calla increases rapidly by offsets, and can be multiplied indefinitely in this manner.

**DON'T OVERWATER.**—If the plants do not seem to thrive after potting, do not make the mistake of drenching them with water, with the hope of reviving them. One thorough watering as soon as they are potted will be sufficient until new growth starts, or at least until the soil seems dry. Shake and sprinkle the plants if they seem inclined to wilt, but beware of too much water at the roots until the new rootlets start into growth.

**"INDISPENSABLES AMONG THE BULBS."**—Spanish iris bulbs for the window-garden and hardy Iris germanica and Iris kaempferi for garden culture are simply indispensable when we realize their desirable characteristics, and it will never be regretted if quantities of them are planted now. Oxalis ortegesi should also be included in the indispensables for window culture, especially for hanging-baskets, as it is handsome both in foliage and flower, and is known as an all-the-year-round flowering plant.

S. W. H.

### HOME TOPICS

**BOILED HAM.**—One who has never tried it cannot imagine how much more dainty broiled ham is if it has first been boiled. Cut nice slices from a cold boiled ham, and broil them just long enough to have them thoroughly hot and a little browned; serve at once on a hot platter for breakfast some morning, and see if all do not pronounce them delicious.

**SALT MACKEREL.**—Wash all the salt off the mackerel, then put to soak with the meat side down in cold water over night. In the morning lay the fish in a baking-pan, and pour over it enough boiling water to cover. Let it stand two or three minutes, then drain off the water, put a few little lumps of butter over the fish, and pour over it one half a teacupful of cream or rich milk, dust a little pepper over it, and set it in a hot oven until it bakes slightly brown.

**INFLAMED EYES.**—There is no better household remedy for inflamed eyes, whatever the cause, than the old-fashioned one of alum enrd. Warm one half a cupful of sweet milk to blood-heat, then add one half a teaspoonful of powdered alum, and stir it until the alum dissolves and the curd forms. Lay this warm enrd between two thicknesses of soft, thin linen, and bind it on the eyes. I have tried this many times and never knew it to fail of curing.

**CARE OF CHILDREN'S FEET.**—What a blessing it is that fashion has decreed that babies and little children shall go bare-footed all through the warm weather; but now that cool fall days have come their feet must be clothed. Parents should give the matter of their children's shoes careful attention, and let no child, even for a day, wear a shoe that is too tight or that does not fit the foot. The bones of the feet, as well as of the rest of the child's body, are soft and pliable, and a tight or ill-fitting shoe worn for a short time may result in permanent deformity of the feet and much suffering. Under no circumstances should a child be allowed to wear shoes with heels, as they throw the body out of poise, the whole weight on the toe and ball of the foot, and break the arch of the foot. Tight shoes not only cause pain in the cramped foot and make it grow ill-shapen, but they disturb the whole nervous system and impede the circulation of the blood. Have you never noticed how cross a tight shoe will make you feel? Then be careful of the feet of the growing children, and not only see that they are kept warm and dry, but that the shoes do not cramp the tender feet.

MAIDA McL.

### A SURPRISE IN ROSES

**HERE** is no reason why we should not have roses in the window-garden, if we can give them a cool room or anything like the proper conditions of soil and temperature. This is the experience of a little woman who succeeded with them in spite of difficulties. "It was beginning to snow late in October, when I happened to learn that the roses Clotilde Soupert and Queen's Scarlet were excellent winter bloomers," she says. "And to think of it! There they were in the middle of the radish-bed—for want of a better place—slowly freezing to death, while I was sighing for plants to fill my bay-window. I flew to the garden, dug them up, and potted them. After cutting back and removing several buds—I didn't enjoy doing the latter a bit, but was told that it was the proper thing to do—I placed them in a sunny window in a cool room. To keep them free from insects I washed them in soap-suds twice a week, rinsing in clear water afterward, and although both plants had bloomed profusely all summer they kept right on, perhaps because having contracted the habit they were unable to stop.

"At all events, to my utter amazement, I positively had roses from Clotilde Soupert for Christmas day—two lovely, soft, pink, fragrant roses—and a bud that opened on New-Year's morning.

"Queen's Scarlet lost its first crop of buds from some unknown cause—an open window, perhaps—but promptly redeemed itself by producing a second and somewhat larger crop in February, when it had seven bright red flowers, small but very sweet.

"After blooming the plants began to look a little delicate. I gave them a top dressing of fertilizer, more soap-suds baths, and in April they were strong and vigorous and getting ready to bloom again."

S. W. H.

# LARKIN SOAPS

The Whole Family Supplied with Laundry and Toilet Soaps for a year at Half Price. Sent Subject to Approval and Payment after.

On Thirty Days' Free Trial.



IT IS WISE ECONOMY TO USE GOOD SOAP. Our soaps are sold entirely on their merits, with our guarantee of purity. Thousands of Families Use Them, and have for many years, in every locality, many in your vicinity. Ask us for your neighbor's testimonials.

## THE LARKIN PLAN

saves you half the regular retail prices; half the cost. You pay but the usual retail value of the soaps and all middlemen's profits are yours in a premium; itself of equal value.

## "Chautauqua" Rocker and Reclining Chair.

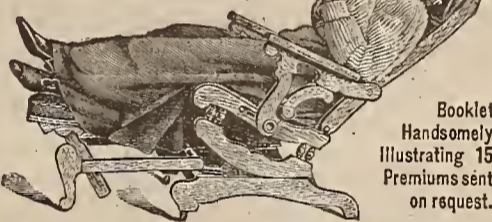
Can be adjusted to any position, and changed at will by the occupant while reclining. Head-rest adjustable. Spring seat. A synonym of luxurious ease and comfort. It is built of oak, polished antique finish. The entire chair is upholstered with corduroy in crimson, old red, tobacco brown, blue or olive, as desired. It is very strong and perfectly simple in construction and fully guaranteed.

AFTER THIRTY DAYS' TRIAL if the purchaser finds all the Soaps, etc., of excellent quality and the premium entirely satisfactory and as represented, remit \$10; if not, notify us goods are subject to our order. We make no charge for what you have used.

If you remit in advance, you will receive in addition a nice present for the lady of the house, and shipment day after order is received. Money refunded promptly if the BOX or PREMIUM does not prove all expected. Safe delivery guaranteed. The transaction is not complete until you are satisfied.

Many youths and maidens easily earn a Chautauqua Desk or other premium free by dividing the contents of a Combination Box among a few neighbors, who readily pay the listed retail prices. This provides the \$10 needed to pay our bill, and gives the young folk the premium as "a middleman's profit." The wide success of this plan confirms all our claims.

THE LARKIN SOAP MFG. CO.,  
Larkin St., Buffalo, N. Y.  
Established 1875. Capital \$500,000.



Booklet  
Handsomely  
Illustrating 15  
Premiums sent  
on request.

The Independent, New York, says: The Larkin Soap Mfg. Co. make our readers a wonderful offer. Not only do they give you a box of excellent laundry soap and toilet articles of great value, but they also give each purchaser a valuable premium, and we personally know they carry out what they promise.

From Epworth Herald, Chicago: We have examined the soaps and premiums, as described above and know they will give satisfaction. We know the Company, have personally visited their establishment in Buffalo, have purchased and used the soaps, and gladly say everything is as represented.

**\$1.95 BUYS A \$3.50 SUIT**  
3,000 CELEBRATED "KANTWEAROUT" double seat and double knee. Regular \$3.50 Boys' 2-piece Knee-pant Suits going at \$1.95.  
A NEW SUIT FREE for any of these suits which don't give satisfactory wear.  
**Send No Money** Cut this ad. out and send to us, state age of boy and say whether large or small for age, and we will send you the suit by express, C. O. D., subject to examination. You can examine it at your express office and if found perfectly satisfactory and equal to suits sold in your town for \$3.50, pay your express agent our special offer price, \$1.95, and express charges.  
**THESE KNEE-PANT SUITS** are for boys from 4 to 15 years of age, and are retailed everywhere at \$3.50. Made with double seat and knees, latest 1898 style as illustrated, made from a special wear-resisting, heavy-weight, ALL-WOOL Oakleaf cassimere, neat, handsome pattern, fine serge lining. Clayton patent interlining, padding, staying and reinforcing, silk and linen sewing. Fine tailor-made throughout, a suit any boy or parent would be proud of. **FOR FREE CLOTHING SAMPLES** for boys 4 to 15 years, write for Sample Book No. 90C, contains fashion plates, tape measure and full instructions how to order.  
**Men's Suits and Overcoats** made to order from \$5.00 up. Samples sent free on application. Address **SEARS, ROEBUCK & CO. (Inc.), CHICAGO, ILL.**

## THAT WONDERFUL CHURN

H. T. Marshall writes us as follows: "I want to add my testimony to the list of those who have used the lightning churn. It does all that they claim for it. You can churn easily in one minute, and get a larger percentage of butter than with ordinary churns. I never took the agency for anything before, but so many of my neighbors wanted churns that I ordered 30 and they are all sold."

Other farmers can do as well as Mr. Marshall. No farmer can afford to be without one of our churns. By using it he can make 25 per cent more butter than with his old churn. Any intelligent farmer can easily sell four or five churns every week in his own township. Every one who sees his churn will want one like it. We will mail circulars and full particulars on demand.

Mound City Churn Co., Ozark Bldg., St. Louis, Mo.

## SOLD! UNDER A POSITIVE GUARANTEE

to wash as clean as can be done on the washboard and with much more ease. This applies to Terrill's Perfect Washing Machine which will be sent on trial at wholesale price if not satisfactory money refunded. Agents Wanted. For exclusive territory, terms and prices write **PORTLAND MFG. CO. Box 4, Portland, Mich.**

**MARRIAGE CERTIFICATES** Memorials, Lord's Prayer, each; 9 for \$1. **J. LEE, OMAHA BLDG., CHICAGO.**

**Foot Need**  
A slipper for health and comfort, for chamber, bonndoir, bath room. Indispensable to invalids and nurses—to everyone who appreciates the luxury of warm feet and restful foot covering. In rubber boots. All sizes for all ages. 25c a pair.  
**PARKER'S ARCTIC SOCKS**  
(Trade Mark Registered.)  
sold by dealers or by mail. Parker pays postage. Agents wanted. Foot Comfort catalog free. **J. H. PARKER, Room 12 103 Bedford St., Boston, Mass.**

**Free!**  
Our Golden Watch has the appearance of one worth \$40.00. The Watch is a GUARANTEED. The cases are beautifully made by the most skilled workmen. The movement is AN AMERICAN STYLE, full plate, expansion balance, quick train, and you can rely upon it that when you own one of these truly handsome watches, you will at all times have the correct time in your possession. Do you want a watch of this character? If so, now is your opportunity to secure one. To introduce our Photograph Outfit we will send you this Watch Free if you will take advantage of our marvellous offer. If you want one, write to us without delay. With your letter send us 12c. in stamps, or 10c. silver for which we will send you a Photograph Outfit and our offer. You can produce a picture with a few puffs of smoke. After you receive the beautiful Watch we shall expect you to show it to your friends and call their attention to this advertisement. This Watch is sent Free, by Registered Post, on your complying with our advertisement, and the marvellous offer which we will send, and it is fully warranted. Money returned if not more than satisfied. SEND US 10 CENTS, silver, or 12 one-cent stamps. We will mail you at once our WATCH OFFER and Photograph Outfit. You will then know all about our watches and also appreciate our Photo Outfit. Address, plainly, at once to **STAR PHOTO. CO., 19 Warren Street, New York.**

**USE IT FREE**  
30 days in your own home before paying one cent in advance; shipped anywhere, to anyone, for 30 days' test trial. We risk you. \$60 White Star Machine, . . . \$25.00 \$50 Pearl Machine . . . 18.00 Standard Singers, \$9, \$12.50, 16.00 Fullset of attachments free; buy from factory and save \$10 to \$40; WE PAY FREIGHT, thousands in use; Catalog, showing 20 other styles, free. Each machine guaranteed 10 years.  
**Consolidated Wholesale Supply Co.**  
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**GOLD-SILVER-NICKEL PLATING**  
A trade easily learned; costs little to start. I will furnish outfits and give work in part payment. Circulars free. Address **F. LOWEY, 93 Lawrence Street, Brooklyn, N. Y.**

**WE PAY THE FREIGHT AND \$15.95 IS ALL IT COSTS.**

This 5-piece parlor suit, largest size rocker, divan, sofa, and two parlor chairs, highly polished mahogany, and upholstered in velvet or tapestry. Suitable for any parlor in the land, \$15.95 and freight paid to all points East of the Mississippi, points West on equal basis. Such a bargain as this you have never seen before, no matter how old you are, and never will again, probably, if you reach the century mark, which we hope you will. Further comment is unnecessary, except that if you want to know of thousands of such bargains, send for our 160-page furniture catalogue, and if you want carpet at such prices as most dealers can't buy for, send for our ten-color lithographed carpet catalogue, and what you'll find in these two books will teach you something that you'll want to remember for many a day. Remember Christmas is coming, and sensible people give sensible gifts which sensible people most appreciate. Something for the home is the best of all presents, and our catalogues will suggest to you what is best. Address (exactly as below)

**JULIUS HINES & SON,**  
Dept. 312. **BALTIMORE, MD.**

**\$2.75 BOX RAIN COAT**

A REGULAR \$5.00 WATERPROOF MACKINTOSH FOR \$2.75.

Send No Money. Cut this ad and send to us, state your height and weight, state number of inches around body at breast taken over vest under coat close up under arms, and we will send you this coat by express C. O. D. subject to examination without return and try it on at your nearest express office and if found exactly as represented and the most wonderful value you ever saw or heard of and equal to any coat you can buy for \$5.00, pay the express agent our special offer price, \$2.75, and express charges.

THIS MACKINTOSH is latest 1899 style, made from heavy waterproof tan color, genuine Davis Cover Cloth; extra long, double breasted, Sager velvet collar, fancy plaid lining, waterproof sewed, strapped and cemented seams, suitable for both rain or overcoat, and guaranteed greatest value ever offered by us or any other house. For Free Cloth Samples of Men's Mackintoshes up to \$5.00, and Made-to-Measure Suits and Overcoats at from \$5.00 to \$10.00, write for Free Book No. 808. Address **SEARS, ROEBUCK & CO., CHICAGO, ILL.**

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Buildings erected expressly for this purpose at a cost of \$225,000

Courses of Steam, Electrical, Mechanical or Civil Engineering; Chemistry; Mining; Mechanical and Architectural Drawing; Surveying; Plumbing; Architecture; Metal Pattern Drafting; Prospecting; Bookkeeping; Short-hand; English Branches.

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Circular FREE. State subject you wish to study.

**THE INTERNATIONAL CORRESPONDENCE SCHOOLS**  
Box 859, Scranton, Pa., U. S. A.

**FREE** WITH 50 CIGARS

Introduce our cigars, we will give free to every purchaser of 50 cigars of our K & Y WEST brand at \$2.50 one of these 18 K KLONDIKE GOLD PLATED stem wind and stem watches, the latest genuine AMERICAN WATCH on the market; warranted to keep correct time for 5 years, equal in appearance to any \$25.00 gold filled watch, and for gentlemen and boys' use only, also gold plated chain and charm free. Cut this out and send it to us with your name and address and we will send you the same package 50 of this handsome watch and chain by express C. O. D. for examination. If after examination you consider it the greatest bargain you ever saw pay the express agent \$2.98 and express charges and the goods are yours. Address **NATIONAL CONSOLIDATED CO.**  
325-53 Dearborn Street, Chicago, Illinois.

**\$3.95 Buys a Man's All-Wool Suit**

warranted best fast color, all-wool black cheviot, elegantly lined, superbly satin piped, perfect in fit and style, very dressy and fully worth \$10.00.

SEND NO MONEY, but send this adv. with height, weight, chest, waist and crotch measure. We'll express the suit C. O. D. and allow you to carefully examine and try it on before you pay one cent. Pay nothing if unsatisfactory. We make extra suits from \$4.95 up. Write for free samples of cloth.

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**EARN A FLOBERT RIFLE**

By selling 15 pounds BAKER'S TEAS, Etc., or sell 30 lbs. for Volunteer Shot-Gun; 10 lbs. for Crescent Camera, Gold Ring, Lace Curtains or Foot Ball; 7 lbs. for Nickel Watch; 25 lbs. for Silver Watch or Tea Set or Banquet Lamp; 50 lbs. for Gold Ring or Dinner Set; 75 lbs. up for Bicycles. Express prepaid.

Write for Catalogue, Etc.

**W. G. BAKER (Dept. 87), Springfield, Mass.**

**\$9.25 FREE IN YOUR HOME**

**\$9.25 pays for a HIGH ARM Sewing Machine**

If you have tried it at your own home DON'T SEND ANY MONEY but write for Catalogue containing 23 other styles, also testimonials and references. In 30 years we have sold one million machines through dealers, (warranted for 10 years.) Now we are going to sell them direct and Save YOU the Agents' Big Profit.

**DAVIS MACHINE CO., DEPT. P, CHICAGO.**

**FAMILY RECORD** A beautiful picture, rich color, background solid gold. Tremendous seller. Agents delighted. Sample free for 12c. 10c postage and advertising; 9 for \$1.00; postpaid.

**HOME ART PICTURE CO., CHICAGO, ILLINOIS.**

## OUR SUNDAY AFTERNOON

### GOD WILL SPRINKLE SUNSHINE

If you should see a fellow-man, with troubles' flag unfurled,  
An' lookin' like he didn't have a friend in all the world,  
Go up and slap him on the back, and holler,  
"How d'you do?"  
And grasp his hand so warm he'll know he has a friend in you.

Then ax him what's a-hurtin' him, an' laugh his cares away,  
And tell him that the darkest hour is just before the day.  
Don't talk in graveyard palaver, but say it right out loud,  
That God will sprinkle sunshine in the trail of every cloud.

This world at best is but a hash of pleasure and of pain;  
Some days are bright and sunny, and some are sloshed with rain,  
And that's just how it ought to be, for when the clouds roll by  
We'll know just how to 'preciate the bright and smiling sky.

So learn to take it as it comes, and don't sweat at the pores  
Because the Lord's opinion doesn't coincide with yours;  
But always keep rememberin', when cares your path enshroud,  
That God has lots of sunshine to spill behind the cloud.

—James Whitcomb Riley.

### HE NEVER DENIES US

SOMETIMES when I am writing at my desk I hear tiny footsteps coming pitter-patter along the hall outside my room, and presently the door-knob rattles, and an imperious little voice exclaims:

"Mus' tum in! Mus' tum in!"

"Not now, Dorothy. Mama is very busy," I answer, and my wee daughter tiptoes away, only to return the next moment and say a little less commandingly and a trifle more coaxingly:

"Dorothy 'ants tum in. P'ease, mama."

"In a little while, dear. Run away now," I cry, endeavoring to go on with my interrupted work. And she obeys, but comes back again, this time wholly humble and sweet, and cries, with tremulous pleading in her baby voice:

"Dorothy so tired. 'Ants mama."

And then I leave my desk, and opening the door, hastily catch the blue-eyed invader in my arms, and hold her close and shower caresses upon her, so full of contrition am I that I denied her admittance in the first place. And sometimes, when I do this, the thought comes to me of Jesus, our loving, compassionate friend—he who never denies admittance to the weary child who knocks at his door and says, "I am so tired, Jesus. I want thee. Take thou me in."

He is ready at all times to take us into his dear, loving companionship, and we must never forget this or feel afraid to go to him and ask for admittance.—Marie Deacon Hanson, in *Young People's Weekly*.

### SUCCESS AND FAILURE

The man who never failed is a myth. Such a one never lived, and is never likely to. All success is a series of efforts, in which, when closely viewed, are seen more or less failures. The mountain is apt to overthrow the hill; but the hill is reality, nevertheless. If you fail now and then, do not be discouraged. Bear in mind that it is only the past experience of every successful man, and the most successful men often have the most failures.

### STRENGTH OF CHARACTER

Strength of character consists of two things—power of will and power of self-restraint. It requires two things, therefore, for its existence—strong feelings and strong command over them. Now, it is here we make a great mistake; we mistake strong feelings for strong character. A man who bears all before him—before whose frown domestics tremble, and whose bursts of fury make the children of the household quake—because he has his will obeyed, and his own way in all things, we call him a strong man. The truth is, that

is the weak man; it is his passions that are strong. He, mastered by them, is weak. You must measure the strength of a man by the power of the feelings he subdues, not by the power of those which subdue him. And, hence, composure is very often the highest result of strength. Did we never see a man receive a flagrant insult, and only grow a little pale and then reply quietly? That is a man spiritually strong. Or did we never see a man in ambush stand as if carved out of solid rock, mastering himself? Or one bearing a hopeless daily trial remain silent, and never tell the world what cankered his home peace? That is strength. He who, with strong passions, remains chaste; he who, keenly sensitive, with manly powers of indignation in him, can be provoked, and yet remain himself, and forgive, these are strong men—the spiritual heroes.—F. W. Robertson.

### LIVE TO-DAY

Aspiration and anticipation are often better than actual attainment. There is a pleasure-giving, health-producing excitement in the stimulus of effort when every function is working at its best, and hope enkindles the eye. Only when the soul is lighted up with blissful expectations of larger things is a man most thoroughly happy. And in this is a lesson. It is a lesson of contentment with the present. One need not, and should not, wait for his happiness until he has attained. He may be happy all along. Indeed, if he is not happy all along he is not likely to be happy at all. If one puts away that kill-joy, worry, and simply does what he can without straining to do what he cannot, he toils cheerfully by day and sleeps sweetly at night, self-respecting, self-sufficing, blessed with noble thoughts, and grateful for the good which God bestows. He, and he only, gets out of the passing day all the sweetness there is in it, because he lives in the present and quietly trusts the future with that Heavenly Father, without whose notice no sparrow falls to the ground.—*Zion's Herald*.

### THE SECRET OF HEALTH

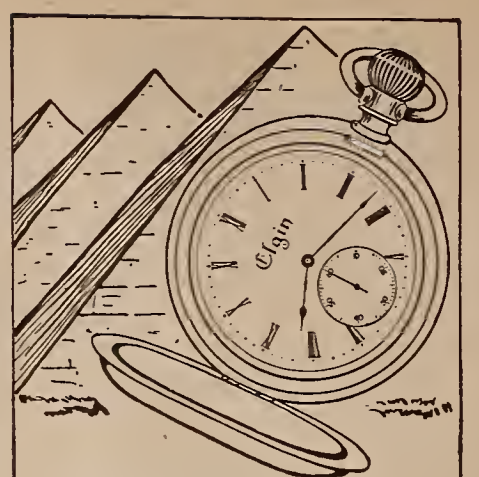
The true secret of health and long life lies in very simple things:  
Don't worry. Don't hurry. Don't over-eat. Don't starve. Fresh air day and night. Sleep and rest abundantly. Spend less nervous energy each day than you make. Be cheerful. "Work like a man, but don't be worked to death." Avoid passion and excitement. Associate with healthy people; health is contagious as well as disease. Don't carry the whole world on your shoulders, far less the universe. Trust the Eternal. Never despair; "lost hope is a fatal disease."—*Chicago Medical Times*.

### THE TRUE WIFE

A blessed thing to have is one human soul whom we can trust utterly, who knows the best and worst in us, and who loves us in spite of all our faults; who will speak the honest truth to us while the world flatters us and laughs at us behind our backs; who will give us counsel and reproof in the days of prosperity and self-conceit; but who, again, will comfort and encourage us in the day of difficulty and sorrow, when the world leaves us alone to fight our own battles as we can.—*Charles Kingsley*.

### HOW PROGRESS COMES

Nothing is more deplorable than the shallow optimism that pictures this world as sailing over summer seas to blessed isles, if only men would believe it to be so. Our true progress does not come in that way. It is rather a steadfast and courageous beating up against tempestuous winds and rugged seas, now to this side and now to that of the straight line we fain would follow; sometimes losing on this tack, sometimes only holding our own upon the other, but gaining on the whole; not able to see it always, except as day after day observation of our relation to the steadfast things above shows it to us.—*Edward M. Chapman*.



### In Pharaoh's Time

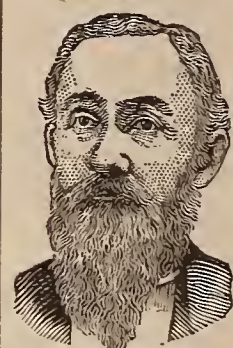
an Elgin watch would have been a greater marvel than the pyramids. It is a great marvel to-day in its complete mechanism and absolute time keeping.

### Ruby Jeweled Elgin Watches

have been the world's standard for a third of a century, during which period nearly eight million perfected time-pieces have done duty dutifully.

All Jewelers Sell Them.

### A New Cure for Kidney and Bladder Diseases, Rheumatism, etc.—Free.



Mr. R. C. Wood, Lowell, Ind.

Disorders of the Kidneys and Bladder cause Bright's Disease, Rheumatism, Gravel, Pain in the Back, Bladder Disorders, difficult or too frequent passing water, Dropsy, etc. For these diseases a Positive Specific Cure is found in a new botanical discovery, the wonderful KAVA-KAVA Shrub, called by botanists, the *piper methy-sticum*, from the Ganges River, East India. It has the extraordinary record of 1,200 hospital cures in 30 days. It acts directly on the Kidneys and cures by draining out of the Blood the poisonous Uric Acid, Lithates, etc., which cause the disease. Professor Edward S. Fogg, the Evangelist, testifies in the *Christian Advocate* that the Kava-Kava Shrub cured him in one month of severe Kidney and Bladder disease of many years' standing. Hon. R. C. Wood, of Lowell, Ind., writes that in four weeks he was cured of Rheumatism and Kidney and Bladder disease, after ten years' suffering. His bladder trouble was so great he had to get up five to twelve times during the night. Rev. Thos. M. Owen, of West Pawlet, Vt., and others give similar testimony. Many ladies, including Mrs. Lydia Valentine, East Worcester, N. Y.; Mrs. Maria Wall, Ferry, Mich., testify to its wonderful curative powers in Kidney and other disorders peculiar to womanhood. That you may judge of the value of this Great Discovery for yourself, we will send you one Large Case by mail FREE only asking that when cured yourself you will recommend it to others. It is a Sure Specific and cannot fail. Address, the Church Kidney Cure Company, No. 409 Fourth Avenue, New York City.

### ELECTRICITY IS LIFE AND WE GIVE IT FREE TO SUFFERING HUMANITY

This Dr. Horne's New Improved Regular \$20 Electric Belt (with suspensory appliance for male) THE BEST ON EARTH, warranted to cure all chronic and weakening diseases of both sexes, will be given away FREE OF ANY COST for advertising purposes to sufferers from any of the following diseases:—Rheumatism, Lumbago, Sciatica, Pains in the Back, Head and Limbs, Spinal Disease, Paralysis, Kidney Complaints, Torpid Liver, Neuralgia, Nervous and General Debility, Female Complaints, Constipation, Asthma, Headache, Dyspepsia, Catarrh, Cold Extremities, Throat Troubles, Heart Trouble, Sleeplessness, Blood and Skin Diseases, Epileptic Fits, Dumb Ague and all weaknesses of men and women. We mean just what we say, FREE OF ANY COST. There are no charges of any kind to be paid by you. We are making this offer to further introduce our Electric Belts and Appliances in new localities, believing that it will pay us in the end. We shall not give away more than one belt to any one person and not more than one in any locality and only to such persons as we think are worthy sufferers, not exceeding one hundred. We have already given away hundreds of these belts to introduce them and it has always paid us, and we believe it will continue to pay us or we could not afford to do so. Send us your name and address and waist measure, and state the nature of your disease. Answer at once. All answers must be sent through the mails and received by us not later than December 10th, 1898, as that is the date on which we shall give away the belts and furnish each person with a list of those receiving them. Address **DR. HORNE ELECTRIC BELT & TRUSS CO., Dept. 27, Chicago, Ills.**

\$1000 REWARD paid to any person proving this advertisement is not honest in every word it contains.

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We teach Book-keeping, Business Forms, Penmanship, Com'l Law, Letter Writing, Arithmetic, Short-hand, English & Civil Service branches thoroughly by MAIL at your own HOME. Success guaranteed. We give a useful, Money-Making Education. Salaried Situations obtained by our students. National reputation, established 40 years. It will pay you. Try it. Catalog free. Trial lesson 10 cents.

**BRYANT & STRATTON**  
330 College Bldg., Buffalo, N. Y.

**FREE TO WOMEN**

I suffered for years with uterine troubles, painful periods, leucorrhoea, displacements and other irregularities, and finally found a simple, safe home treatment, that cured me without the aid of medical attendance. This is no quack doctor's medicine; but nature's own remedy for women.

It costs nothing to convince yourself of its merits, for I send it free with full instructions to every suffering woman. Address **MRS. L. H. DUNT, South Bend, Ind.**

**WANTED** Ladies and gentlemen to procure subscriptions for the best fifty-cent woman's monthly magazine in the United States. The most beautiful and popular woman's magazine on very liberal commissions. Terms, sample copies, special helps and premiums furnished free. Address **THE AMERICAN QUEEN, 78-80 Walker St., New York.**

**Dr. Isaac Thompson's EYE WATER**

Manufactured with SORE EYES USE



SMILES

A POOR UNFORTUNATE

I.

His hoss went dead an' his mule went lame,  
He lost his cows in a poker game;  
A hurricane came ou a summer's day,  
An' carried the house whar he lived away;  
Then a earthquake come when that wuz gone,  
Au' swallowed the land that the house stood  
on!  
An' the tax collector, he come roun'  
An' charged him up fer the hole in the groun'  
An' the city marshal—he came in view,  
An' said he wanted his street tax, too!

II.

Did he moan an' sigh? Did he set an' cry?  
An' cuss the hurricane sweepin' by?  
Did he grieve that his ole friends failed to call  
When the earthquake come an' swallowed all?  
Never a word of blame he said,  
With all them troubles on top his head!  
Not him! . . . He climbed on top of the  
hill—  
Whar standin'-room wuz left him still,  
An' barin' his head, here's what he said,  
"I reckon it's time to git up an' git;  
But, Lord, I hain't had the measles yit!"  
Frank L. Stanton, in Atlanta Constitution.

IT WAS PINK

WHILE standing on top of Lookout mountain a few days ago I was carried back to memories of dear old Bill Nye, for we had stood upon that same spot some years before, and a guide told us that we could see seven states from that point of view; namely, Tennessee, Virginia, Kentucky, North Carolina, South Carolina, Georgia and Alabama.  
"Where's North Carolina?" Nye inquired.  
The man pointed to a particular place in the purple horizon.  
"What makes you think that is North Carolina?" Nye asked.  
"Oh, we know by the direction and the conformation of the mountains there," the man replied.  
"Well, I know that is not North Carolina," Nye declared, with some vehemence. "And you would know it too if you would stop to think. Here is a map of the United States, and you can see that North Carolina is pink. Besides, I know it is pink. I live in that state considerably, and I have helped to paint it red, but of course I go away sometimes and then it fades a little, leaving it pink. No, sir, you can't stuff me that way. The place you are pointing at a color-blind man could see is purple."  
Nye said those things so seriously that the man was almost dazed. He gave Nye a puzzled look, and then went on pointing out other sisters in the late confederacy.—W. L. Visscher, in Chicago Times-Herald.

A FUEL SUPPLY

An Irishman who wished to come to America shipped on board a vessel as sailor. During the voyage across the Atlantic a friend of his, who was also a sailor, died. Pat had known him in the old country. It is the custom when a person dies at sea to sew the body up in a sack, hang a weight to it to make it sink, and drop it overboard, with a prayer. Well, when O'Rourke died, they had no shot to weight it with, so had to put in two or three big lumps of coal instead. Pat was there to see the last of his friend. When the sack was lowered into the water Pat said, with tears in his eyes, "Oi always knew O'Rourke to be a bad man, and Oi often tould him where he was goin' phin he doid, but I didn't tink he'd have to take his own coal wid him."—Sbort Stories.

A SLIGHT MISTAKE

As a lady entered a crowded street-car the other night an old man holding a little boy on his lap arose and offered her his seat.  
"Oh, no, thank you!" replied the lady.  
"Keep your seat, and hold your boy."  
"Oh, that is different," said the old man (who was slightly deaf). "I had to stand up five days myself once with a boil. I'm sorry for you."  
And he resumed his seat amid the roar of laughter which followed.

A PLAY UPON WORDS

An exchange says a gentleman invited s me friends to dinner, and as the colored servant entered the room he accidentally dropped a platter which held a turkey. "My friends," said the gentleman, in a most impressive tone, "uever in my life have I witnessed an event so fraught with disaster in the various nations of the globe. In this calamity we see the downfall of Turkey, the upsetting of Greece, the destruction of China, and the humiliation of Africa.

MISTAKEN IDENTITY

They were in a railroad-car, journeying to Chicago. Ou the opposite seat was a man of commanding figure and massive brow and thoughtful expression.  
"What a fine countenance, James; I wish I knew his occupation."  
"Maybe he's a rich lawyer."  
"There's too much benevolence in his face for a lawyer."  
"He may be a banker."  
"Not a bit of it! A man with such a heavenly expression couldn't content himself with money-getting. His aim in life is higher than that."  
"I guess you are right, Amelia. I'll take your word and his for that."  
At the next station an inquisitive farmer took a seat beside the man with a noble brow, and asked him about his vocation. Amelia held her breath and listened to the reply. It was this:  
"I keep a saloon and a meat-shop. My wife sells beer and I do my own butchering."

THEIR CURIOSITY TOO MUCH

The minister of a country church was greatly annoyed on Sundays by the women turning around every time any one came in, and so interrupting the sermon. At last he hit upon a plan for stopping it. The next time he preached he gave this notice out:  
"So that no one need turn around, I will call out the name of the person or persons entering this church during my sermon." And then he started:  
"Dearly beloved brethren—Farmer Jacobs and his wife—the text for to-day will be—Miss Jones—seventh chapter, second verse, of —Mrs. Brown and baby—St. John, where it says—Mr. and Mrs. Smith, with a new bonnet on—"  
Here he discovered his mistake and was going to correct himself, but it was too late—all the women in the place had turned around.

HE KNEW

Mr. W., walking down the street, came upon a crowd of people gathered around a house where there was a funeral.  
He paused for a moment, and as the coffin was being carried to the hearse, turned to a hurly Irishman who stood next to him, and asked:  
"Who is dead?"  
Pat slowly turned the cutty from between his lips, and replied, with becoming gravity and in a low voice:  
"It's the gintleman in the coffin, sur."

CHINESE BLUNDERS

Speaking of Chinese blunders, a funny one happened in Shanghai:  
"Ah Sing," I said to the Chinese servant, handing him a well-worn pair of shoes, "take these shoes and have them soled."  
"All lightee," said Ah Sing, "my savey."  
The next day I called Ah Sing and said:  
"Have those shoes been mended, Ah Sing?"  
"No mendee shoes," said Ah Sing. "You say have shoes sold. Me sell um. Here two dolla!"—Eli Perkins.

CHILDREN'S IMAGINATIONS

"When I grow up," said Ethel, with a dreamy, imaginative look, "I'm going to be a school-teacher."  
"Well, I'm going to be a mama and have six children," said Edna.  
"Well, when they come to school to me I'm going to whip 'em, whip 'em, whip 'em" (with crescendo intonation).  
"You mean thing!" exclaimed Edna, as the tears came into her eyes, "what have my poor children ever done to you?"—Eli Perkins.

TABLE TALK

"You're pretty smooth," said the vinegar to the olive-oil, "but you are not half so sharp as I am."  
"Huh! I wouldn't talk," rejoined the oil.  
"You are not so slick. Why, you can't even get away from your mother."

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One of the neatest little booklets yet issued is the one recently published by the Chicago, Milwaukee & St. Paul Railroad, which illustrates our foreign possessions, including Honolulu and the Public Buildings, Hong Kong, Manila, etc.  
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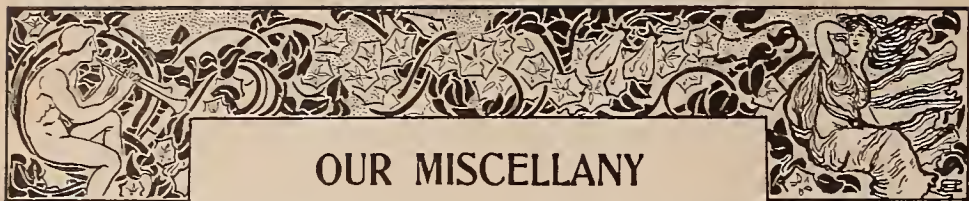
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## OUR MISCELLANY

## WIND AS A MOTIVE POWER

THE well-known Danish scientist and inventor, Professor la Cour, has given the question of a more rational utilization of the wind's power a most thorough and careful attention for a series of years, and has carried on a number of state-aided experiments and tests in this connection. In an interesting lecture before a Copenhagen scientific society Professor la Cour communicated some of the results he had already obtained. He first touched upon a few historical points, stating that the first epoch-making technical essay paper had emanated from the Alexandrine mathematician Hero, who lived some 2,000 years ago. It dealt with the utilization of Nature's powers, and mentioned pumps, syringes, automats, etc., but his work was not continued by anybody. The matter was allowed to rest for 1,500 years, when a new move was made in the Orient, and by the Mahomedans carried to Europe, where it grew and increased, until it, by the discovery of the application of steam, received an immense impetus. But Hero's essay had given the first impulse; it was widely translated and commented upon. The utilization of wind power became more general, and the engineers of that period gave the bulk of their attention to the construction of wind and water mills. With regard to the most practical construction of a windmill, Professor la Cour pointed out the fallacy of the opinion that the greatest effect was obtained by horizontally moving wings.

He touched upon the various manners in which the problem of turning the mill according to the wind had been solved, and then dealt with the construction of the wings. The great mathematicians of the last century had given much attention to this question; but all their careful calculations had not led to any real results. Their physical suppositions were erroneous, because they held that the effect upon the mill exclusively depended upon the pressure of the wind when it struck the wings.

The question of the effect of the wind's pressure upon a flat surface is a complicated one, but has in any case been demonstrated that the suction on the lee side is a very important factor. Professor la Cour had at his experiments measured the effect that an artificial—and consequent even—wind had upon different models at different speeds, and these experiments bore out the correctness of some of the ordinarily accepted rules in the construction of windmills, for instance, as regards the number of wings. A mill with sixteen wings had only one and a third times as much power as one with four. In measuring the percentage of the power of the wind striking the wings, which was absorbed or utilized by the latter, he arrived at this, at first sight, somewhat startling figure of 143.7 per cent. This unlooked-for result was owing to the above-mentioned suction on the lee side of the wind passing between the wings. That the wings should not be plane, but have a bent or a concave shape, was an old-established truism, and the shape of the wings has in reality much influence upon the suction which is more especially caused by the wind, which just passes the edges of the wing.

In measuring the percentage of the wind-power utilized, it was, consequently, also taken into account the wind passing between the wings, and instead of 143.7 per cent, the figure was 21 per cent. The absolutely best shape for wings has, however, not yet been ascertained. The most important practical point in connection with windmills is the solution of the problem how best to neutralize the inconveniences caused by the irregularity of the wind. Professor la Cour has for this purpose constructed an original regulator, called the Kratostate, by means of which a windmill can very well be used for working a dynamo.—London Engineering.

## THE ROMANCE OF ALUMINIUM

An incident in Roman history, overlooked by scientists for many centuries, is related by Pliny (23 A. D. to 79 A. D.), that during the reign of the Emperor Tiberius (41 B. C. to 39 A. D.) a certain worker in metals appeared at the palace and showed a beautiful cup composed of a brilliant white metal that shone like silver. When the artificer was presenting it to the emperor he purposely dropped it upon the floor of the chamber. The goblet was so bruised by the fall that it seemed to be irretrievably injured; but the workman took his hammer, and in the presence of the court repaired the damage without delay. It was evident that his metal was not silver, though it had almost the same brilliancy, besides being much more ductile and considerably lighter. The emperor questioned the artificer closely, and learned from him that he had extracted the metal from an argillaceous earth—probably the clay known to modern chemists as alumina. Tiberius then asked if any one besides himself knew the process, and received the proud reply that the secret was known only to himself and Jupiter. This

answer was sufficient. The emperor had reflected that if it were possible to obtain this metal from so common a substance as clay the value of gold and silver would be greatly reduced, so he determined to avert such a lamentable catastrophe. He caused the workshops of the discoverer to be wholly destroyed, and the luckless artificer was seized and decapitated, so that his secret might perish with him. M. Sainte-Claire Deville had no doubt that this metal was aluminium, and he asserted that the wanton cruelty of Tiberius had deprived the world of this valuable metal, which remained unknown for fourteen centuries. The extracting of aluminium, discovered by the Roman craftsman in the first century of the Christian era, thus become one of the lost arts.—Aluminium and Electrolysis.

## SPORT AND MANHOOD

The rules of amateur sport, written and understood, are really, though in different phraseology, the rules for the making of the highest type of manhood. Certainly it is not book-learning, ability to pass examinations, or any racial brilliancy of intellect which have made the British successful colonizers, while the French have failed signally. The ability to give and take, the personal independence of a man often obliged to take care of himself away from the artificial resources of civilization, a certain gentleness which belongs to the strong, and confidence which grows rapidly with success—these qualities make the colonizer and the effective ruler, and these qualities are bred in great masses of men only by the drilling of the army or the large boys' schools or well-conducted sport.

The Frenchman, the Italian, or even the Spaniard is a far quicker man mentally than the Englishman, but they are all far inferior to the American or the Englishman in the fundamental virtues that make a first-rate man. Steadiness, truthfulness, loyalty, resourcefulness, endurance and gentleness—these win as over against any other qualities, and they win logically, because even weaker races see that such virtues are the most lasting. As a result, in India the natives will lend their hoarded wealth to their English rulers, while they hide it from their native rulers, and the Anglo-Saxon's word has come to be more valuable in the markets of the world than other men's bonds, and all because there is a man behind it.—Outing.

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- Keep your own secrets, if you have any.
- Never borrow if you can possibly avoid it.
- When you speak to a person look him in the face.
- Read over these maxims at least once a week.
- Make few promises. Live up to your engagements.
- Do not marry until you are able to support a wife.
- Keep yourself innocent if you would be happy.
- Ever live (misfortune excepted) within your income.
- Save when you are young, to spend when you are old.
- Never run into debt unless you see a way out of it again.
- Never speak evil of any one. Be just before you are generous.
- Avoid temptation, through fear that you may not withstand it.
- Good company and good conversation are the very sinews of virtue.
- When you retire think over what you have been doing during the day.
- Never be idle. If your hands cannot be fully employed, attend to the cultivation of your mind.—Success.

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Having recently purchased the entire stock of watches from a bankrupt firm, consisting of solid gold, silver and gold-filled cases, we shall offer a portion of the entire lot at prices never before heard of in the watch trade. Among the stock are 2,700 AMERICAN STYLE WATCHES, in SOLID GOLD-FILLED CASES, which we shall sell singly or by the dozen to private parties or the trade, at the unheard-of LOW PRICE OF \$3.98 EACH. Each and every watch is guaranteed a perfect timekeeper, and each watch is accompanied with our guarantee for 20 years. Think of it! A genuine American Style Movement watch, in solid gold-filled case, and guaranteed 20 YEARS for \$3.98. Those wanting a first-class, reliable time-keeper at about one-third retail price, should order at once. Watch speculators can make money by buying by the dozen to sell. CUT THIS OUT and send to us and we will send a watch to you C. O. D., subject to examination, by express, upon approval. If not perfectly satisfactory, and exactly as represented, pay \$3.98 and express charges, and it is yours, otherwise you do not pay a cent. Can we make a fairer offer? Be sure to mention whether you want ladies' or gent's size. Price per watch, \$42.00. If full amount, \$3.98 is sent with the order, we will include one of our special heavy GOLD FILLED CHAINS, which retail the world over, for \$1.00. Address at once, SAFE WATCH CO., 19 Warren St., NEW YORK.

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## BERRY-SPOON ...PIE-KNIFE

This silver-plated Pie-knife and Berry-spoon matches our regular silverware fully described in our last issue. It is plated with full standard amount of coin-silver and guaranteed to give entire satisfaction or money refunded.

## \*\*FREE\*\*

Either the Pie-knife or Berry-spoon will be given Free for a club of **THREE** yearly subscribers to *Farm and Fireside* at the Clubbing Price, 30 cents each. . . . .

We will send *Farm and Fireside* one year and either the Pie-knife or Berry-spoon to any one for the Clubbing Price,

**60 CENTS** (Regular Price, 80 cents.)

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Illustrations Reduced Size.

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The full length of Pie-knife is 9 1/8 inches. Width, 2 3/8 inches.

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NOTE.—Thirty cents is the clubbing price for yearly subscriptions to Farm and Fireside without a premium to the subscriber. But members of clubs may accept any of our premium offers at the clubbing prices and their names can be counted in clubs. RENEWALS and new names, including a club-raiser's own subscription, can be counted in clubs. Positively no reduction in clubbing prices will be made.

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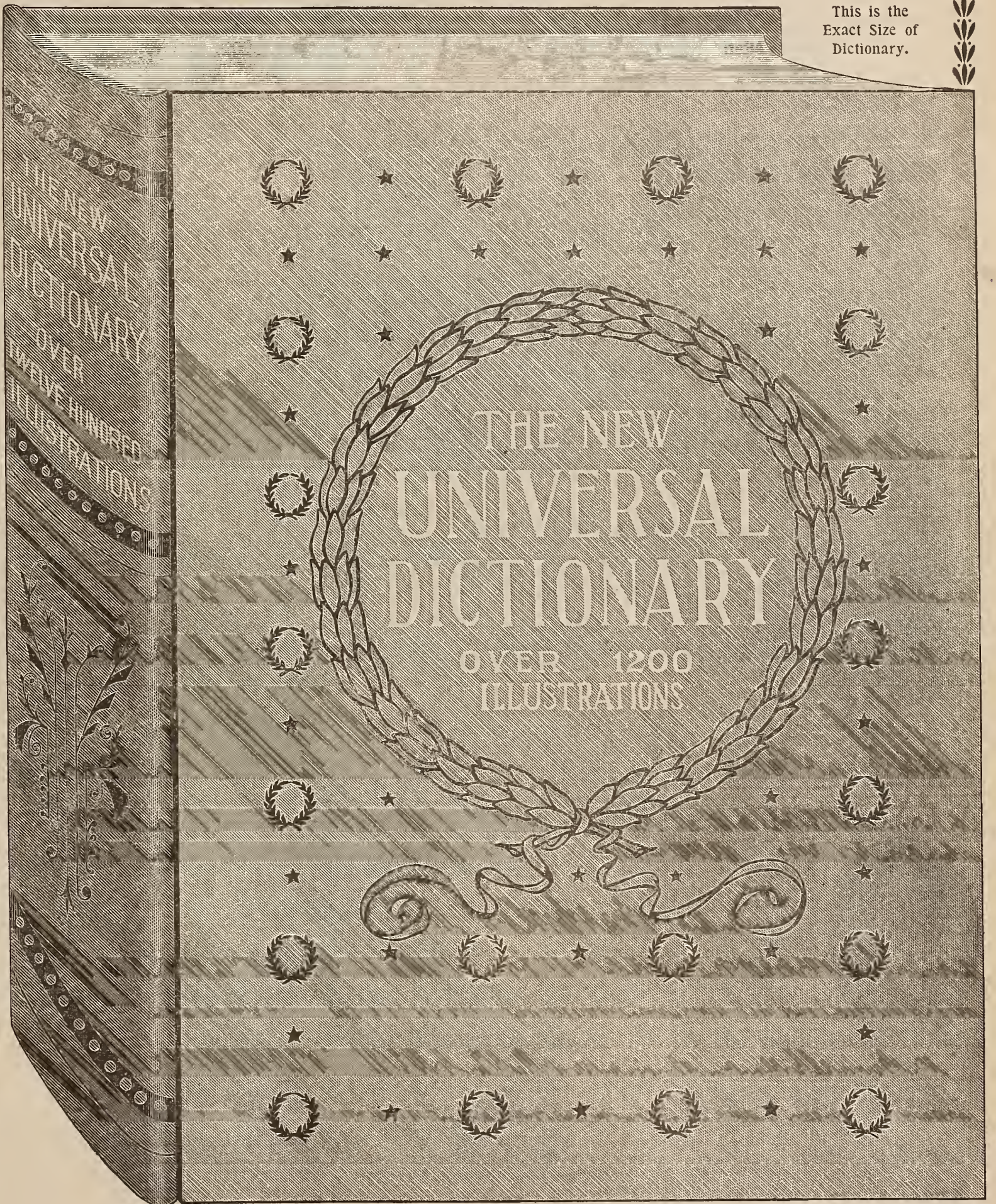
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is so very clean and DUST-LESS, which is such a comfort to good housekeepers. The old-fashioned brands of Stove Polish do the work in the old-fashioned way. Enameline is the Modern Stove Polish, and that is the difference. Put up in paste, cake or liquid form. Sold in every civilized country on earth.

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Only, Is available as Plant Food.

Much depends therefore upon the mechanical condition of manure. It should be thoroughly fined and evenly spread to produce the best results.



...KEMP'S...

### Manure Spreader

Is the only machine known to man that will do both and do it better and cheaper than it can be done by hand. Has stood the test of 18 years and daily grows in popular favor. Send for catalogue and "Treatise on Manure." FREE to inquirers.

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With our Duplex Automatic Machine you can make 100 styles of fence at the rate of 60 rods a day, that will turn everything except wind and water. Makes a good hog fence at 12c. per rod. Rabbit-proof fence for nurseries, orchards, etc., at 16c. per rod. A splendid farm fence at 18c. per rod and poultry fence

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at 19c. per rod. Every foot of it will possess the three leading features of this ad. Plain, coiled spring and barbed wire to farmers at wholesale prices. Get our free catalogue before buying. Address,

KITSELMAN BROS., Box 225, Ridgeville, Ind.

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## A FARM POWER

### IS A NECESSITY

in the practice of modern agriculture. They are needed for shelling corn, grinding feed, cutting fodder or ensilage, separating cream, wood sawing, pumping water, and a host of other things.

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are clearly the best for the purpose. Either Upright or Horizontal; from 3 h. p. up. Safe, simple, easy to run. They are quick

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buy a wagon that had everlasting wheels WOULD YOU DO IT? Wouldn't it be economy to do so? Well here's how:

### Electric Steel Wheels

They can't dry out and get loose; they CAN'T ROT OR BREAK DOWN. Don't make any difference what wagon you have we can fit it. Wheels of any height and any width of tire. May be the wheels on your wagon are good. If they are buy

one and a high one. Send for catalogue, it is free. Electric Wheel Co., Box 96, Quincy, Ills.



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Full Descriptive Catalogue FREE

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### AGENTS WANTED BOTH

Sexes. Goods sent to reliable persons to be paid for after selling. The Electricity from the batteries will turn a needle through your table or hand. Cures rheumatism, liver and kidney disease, weak and lame back, etc. For advertising purposes will give one half free to one person in each locality. Address E. J. SNEED & CO., Dept. No. 119, Vineland, N. J.

INHALERS cure Colds, Coughs, Sore Throat, Headache, Neuralgia, etc. AGENTS MAKE BIG MONEY. Sample 25c. 1 doz. \$1.50 postpaid. J. LEE, Omaha Bldg., Chicago.

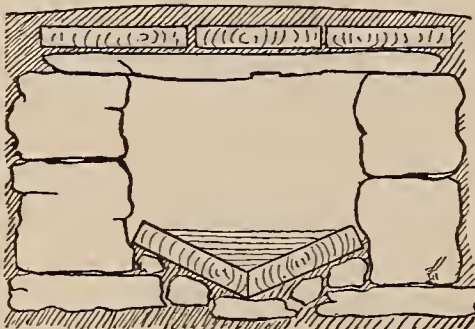
## OUR FARM

### CULVERT CONSTRUCTION

JUDGING from the culverts seen in various parts of the country their construction seems to be a lost art. It seems as if every principle upon which their successful operation depends were entirely ignored. As a result numberless culverts are destroyed by each rain-storm.

Three things should be borne in mind in constructing a culvert: First, there must be a fall from the up-stream to the down-stream end, and not, as is too commonly the case, no fall at all. A fall of two inches to the rod is the least that should be allowed when all other conditions are favorable. When less than "most favorable" the fall should be increased. Second, the bed or channel must be as smooth as possible to prevent the collecting of leaves, sticks, etc., to clog the passage. Third, the channel must be made as narrow as possible consistent with the volume of water to be carried. In such case it will be almost sure to keep clean if the second rule has been observed.

The best form for a culvert is the egg shape, with the small end down; but since tiles of such shape are often difficult to ob-



tain and may be thought expensive, and since streams large enough to demand brick culverts of this form may often be more economically bridged, the farmer would better use large round tile or sewer-pipe. It may, however, often be thought too expensive to purchase tile of large enough capacity to carry the stream. In this case a serviceable culvert and one that will fill all the requirements may be made of flat stone. The sides and top may be built to suit the fancy of the builder. He usually does pay most attention to them anyway. But the channel, which is the vital part, and yet the least one considered, as a general thing, should be in the form of an obtuse angle, as shown in the illustration. When suitable stones cannot be procured, plank will answer the purpose. A channel constructed in this form and having a good fall will be practically self-cleaning and will not fail at the critical time, in fact, the reverse, for any slight trash that may be accidentally carried in and deposited will be swept out at once by the first water deep enough to move it. There will be practically no danger, then, of the culvert being destroyed or its acting as a dam instead of a waterway.

M. G. KAINS.

### A PROTECTED CORN-CRIB

The keeping of cats does not always insure against the loss of grain from the corn-crib, because these animals cannot always hold the rats and mice in check. The cats, even the best of them, are at times not absolutely honest, often stealing milk and other food when they are not watched.

The thefts of rats and mice may, however, be readily prevented by nailing wire netting, such as is used for the best fly-screens, upon the inside of the corn-crib.

If the crib has been made smooth, and the netting is carefully laid, there should be no trouble in taking up the grain with a scoop. But if a little extra trouble be taken, and the netting be fastened to the studding underneath the laths, it will last much longer and will not be subject to as much strain and wear.

The cost of such a finish is slight. If purchased by the roll the netting may be obtained at from two to four cents a square foot. For an outlay of five dollars an ordinary corn-crib may be made impregnable to rats, mice and even flies. There will be no loss of corn, no fouled grain and no filth in such a crib. A saving of from twenty-five to one hundred per cent may often be thus effected.

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It will pay you to buy a Saw with "DISSTON" on it. It will hold the set longer, and do more work without filing than other saws, thereby saving in labor and cost of files. They are made of the best quality crucible cast steel, and are

FULLY WARRANTED.

For Sale by all Dealers.

Send for Pamphlet, or "Saw Book," mailed free. HENRY DISSTON & SONS, Philadelphia, Pa.

## ENTERPRISE Meat and Food Choppers

Twenty-eight sizes and styles, \$1.50 to \$275.00

No. 5, Clamps to table,	Price, \$2.00
No. 10, " "	" 3.00
No. 20, " "	" 5.00
No. 12, Screws on table,	" 2.50
No. 22, " "	" 4.00
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FOR CHOPPING Sausage and Mince Meat, Hamburg Steak for Dyspeptics, Tripe, Hoghead Cheese, Suet, Codfish, Coconut, Clams, etc.

For sale by the Hardware Trade. Catalogue Mailed Free.

### Farm and Fireside says:

"It is the only Meat Chopper we ever saw that we would give house room. It has proved such a very useful machine that we want our readers to enjoy its benefits with us."

Our trade-mark "Enterprise" is on every machine. Send 4c. in stamps for the Enterprising Housekeeper—200 recipes.

THE ENTERPRISE MFG. CO. OF PA. THIRD & DAUPHIN STS. PHILADELPHIA.

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OVER 50 STYLES TO SELECT FROM

No money in advance. Safe delivery at your depot insured. Installments. Easy payments. Our new 1899 Catalogue shows it all. Send for it today. Our Catalogue Handsome Premium Free.

Don't buy elsewhere until you have seen our Premium Book. Organs from \$25.00 up. Pianos from \$155.00 up. Our new 1899 Coupon entitles you to deduct \$10.00 from the price of any Organ, or \$20.00 from any Piano. We give more for the money than any Company in the World. You can prove it by sending a postal card for the largest and best Catalogue in the world. Our Motto:



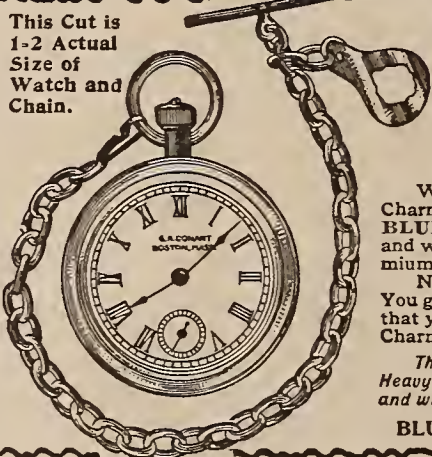
### LARGE SALES, SMALL PROFITS.

You may not buy from us, but get our Catalogue. It will at least make other companies come down to our prices. We can save you money and we are prepared to prove it. Our factory, with its enormous capacity, enables us to sell you a high-grade instrument at a figure much below that of any other company in the world.

Incorporated for Fifty Years. We Lead, Others Follow.

BEETHOVEN PIANO AND ORGAN COMPANY BOX 628 WASHINGTON, N. J.

This Cut is 1-2 Actual Size of Watch and Chain.



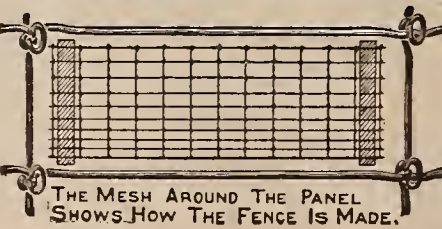
## Watch and Chain FOR ONE DAY'S WORK.

We send this Nickel-Plated Watch, also a Chain and Charm to Boys and Girls for selling 1 1/2 dozen packages of BLUINE at 10c. each. Send your full address by return mail and we will forward the Bluine, postpaid, and a large Premium List.

No money required. We send the Bluine at our own risk. You go among your neighbors and sell it. Send us the money that you get for it and we send you the Watch, Chain and Charm, prepaid.

This is an American Watch, Nickel-Plated Case, Open Face, Heavy Bevelled Crystal. It is Guaranteed to keep Accurate Time, and with proper care should last Ten Years.

BLUINE CO., 392 CONCORD JUNCTION, MASS.



THE MESH AROUND THE PANEL SHOWS HOW THE FENCE IS MADE.

## PERFECT FARM FENCE

Made of best doubly annealed galvanized steel wire. Top and bottom wires No. 9. All other wires No. 11. We use the strongest stay wire in any woven wire fence on the market—hence more strength and durability. Our LOOP KNOT (entirely new feature, patented), provides perfect expansion and contraction and keeps it tight at all temperatures. Our LOOP KNOT being uniformly distributed throughout each foot of fence is, in effect, the same as placing one coil of a spiral spring in every foot throughout the entire length of fence, BESIDES GREATLY STRENGTHENING IT. Our Loop Knots make the fence plainly visible and impossible for stay wire to slip or give. It is light and strong. Will turn all kinds of stock without injuring them. Where we have NO AGENTS a LIBERAL DISCOUNT will be given on introductory order. Reliable farmer agents wanted in every township. Send for catalogue and prices.

PITTSBURG WOVEN WIRE FENCE CO., - PITTSBURG, PA.



There are hundreds of sleeping rooms about the country now cold and cheerless, that might be made otherwise by the use of the

## ROCHESTER RADIATOR

with its 120 cross tubes. One stove or furnace does the work of two, and you thus

### SAVE 1/2 YOUR FUEL

if you don't understand it, send for free booklet. Where we have no active agent we will sell at wholesale price to introduce.

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VOL. XXII. NO. 4

EASTERN  
EDITION

NOVEMBER 15, 1898

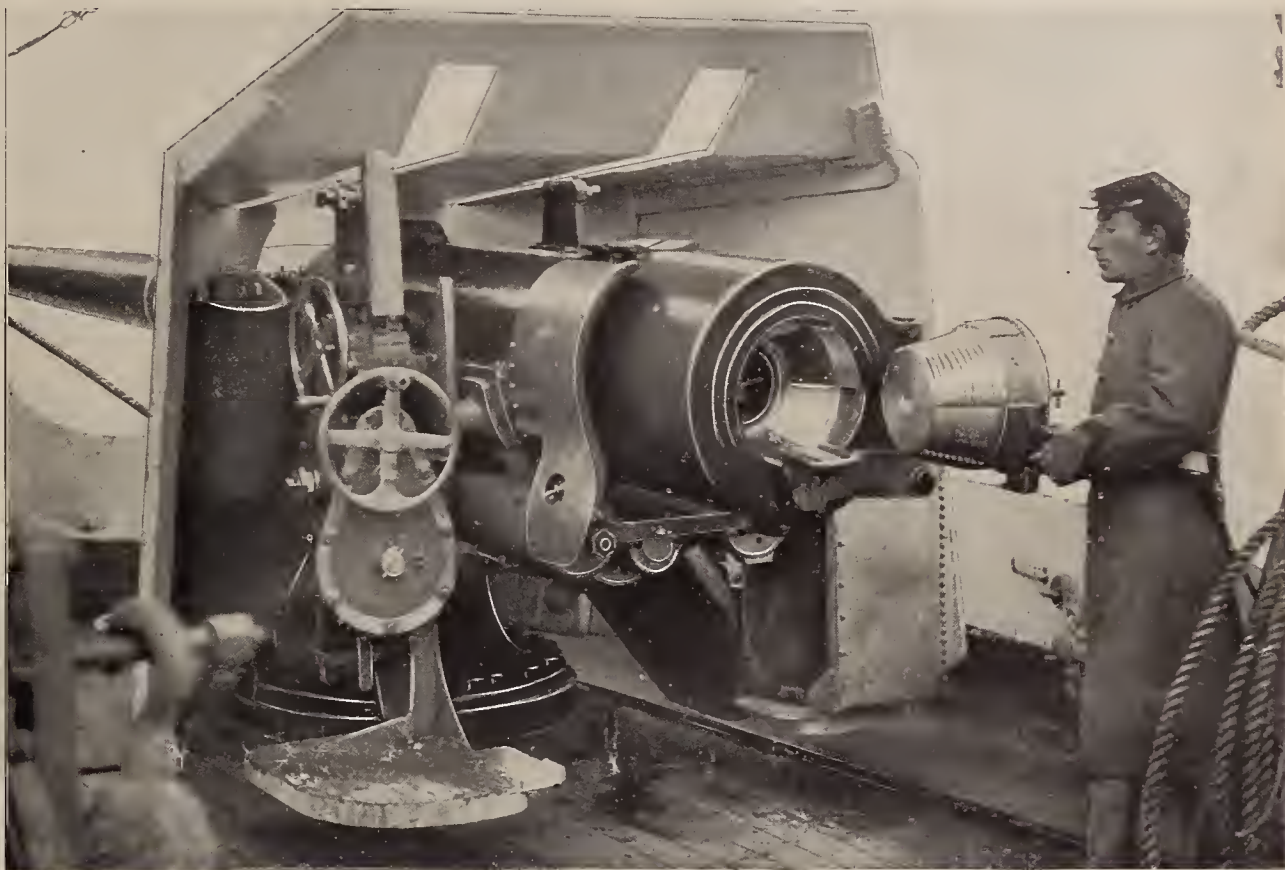
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## OUR NEW BOOK

Destiny has suddenly made the United States an empire. The fortunes of war have added to her care and ownership rich tropical islands in the Atlantic and Pacific oceans. They are ours, yet they are strangers, for want of accurate pictorial knowledge of them. This want is fully supplied by our new book of photographic views. Turning its pages is like the passing of a grand panorama. Its realistic pictures present to the eyes beautiful and marvelous sights in those fertile island countries.

The illustrations on pages 1, 2, 23 and 24 and the description on page 21 give a hint of the contents of the book. It will be an intensely interesting book—one which is sure to interest and delight every member of Farm and Fireside homes. It will contain



## OVER 300 VIVID PHOTOGRAPHIC VIEWS



Home of a Cuban Farmer

Of picturesque scenes and interesting objects in Cuba, Porto Rico, Hawaii and Philippine islands; also numerous fine scenes in the United States associated with the Spanish-American war, as camp pictures, life in the army and on the war-ships, etc. For fuller description see page 21.

Orders for our new book of photographic views should be sent at once, and they will be filled in the order of first come first served. We are pushing the work on the book to rapid completion, and will have it ready about Christmas, or sooner if possible.

This Grand Book, and  
This Paper One Year, **40 Cents**





A Public Reader in Manila



A Yard for Drying Coffee on a Coffee-plantation in Porto Rico

## MOST INTERESTING PICTURE-BOOK OF THE YEAR



This Picture Shows the Style of Houses, Fencing, Wagons and Draft-animals in the Philippine Islands

The photographic camera tells no stories. It does not exaggerate, neither does it leave out anything. The photograph gives it to you as it would look if seen through your own eyes. Our new book of photographic views contains over 300 engravings which are exact reproductions of photographs. They are true to life and tell their own story.

By this book you bring into your home typical scenes from Cuba, Porto Rico, Hawaii and the Philippines which will give your children a better idea of these countries than can be had through any other source. They here see the people just as they are, and the kinds of houses they live in. They see the kinds of trees and plants which grow there. They have before them scenes in the country and cities as they exist at this very moment. They also find in this book scenes of army and navy life, and other views which will give them a better understanding of the recent Spanish-American war.

Call your friends' and neighbors' attention to their opportunity of getting this interesting book for almost nothing.

We will send Farm and Fireside one year and this Book of Photographic Views to any one for the Clubbing Price,

**40 Cents**

The Picture to the Left Shows the Effect of the Enemy's Shots on the Steel Plates of the War-vessels.

FOR FULL DESCRIPTION OF THIS BOOK SEE PAGE 21

The Picture to the Right Shows the Method of Punishing Prisoners Convicted of Minor Offenses in Philippine Islands.





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## WITH THE VANGUARD

LAST month the United States Supreme Court rendered a decision which is, considering the principles and property involved, one of the most important in its history. In deciding the case of the Joint Traffic Association the court declared combinations of railroad companies for the regulation of rates to be in restraint of trade and illegal, and affirmed the constitutionality of the Sherman Anti-trust Law.

An abstract of the opinion reads, in part:

"The real question is declared to be whether Congress, in the exercise of its right to regulate commerce among the several states, has the power to prohibit, as in restraint of interstate commerce, a contract or combination between competing railroad corporations entered into for the purpose of establishing and maintaining interstate rates and fares for the transportation of freight and passengers, even though the rates thus established are reasonable. Such agreement is declared to directly affect the cost of transportation of commodities, and if the transportation be between two states it is declared to affect interstate commerce by destroying competition and maintaining rates above what competition might produce. It is the opinion of the court that Congress has the power in the case of railroad corporations to say that no contract shall be legal which shall restrain trade and commerce by shutting out the legal law of competition.

"The court holds still further that railroads are public highways, requiring a public franchise, which the state would have no power to grant unless the use to which they were to be put was a public one, and comes under the jurisdiction of Congress by virtue of its power to regulate interstate commerce, and where the grantees of this public franchise are competing railroad companies, the court holds that it is competent for Congress to forbid any agreement or combination among them whereby competition is to be smothered. The only question is as to the extent of the power which Congress may exert along this line. It is, however, declared by the court to extend at least to the prohibition of contracts relating to interstate commerce which would extinguish competition. It is the combination of these large and powerful corporations, covering vast sections of territory and influencing trade throughout the whole extent thereof, that constitutes the alleged evil."

"The business of a railroad carrier," said Judge Peckham, in announcing the decision, "is of a public nature, and in performing it the carrier is also performing, to a certain extent, a function of government which requires it to perform the service upon equal terms to all. The question of government ownership and operation of railroads is not touched by the decision, but the principle of government control is very clearly and positively affirmed. Broadly, the grantees of all public franchises must perform their services 'upon equal terms to all;' and it is competent for Congress and state legislatures to forbid any agreement or combination among them by which competition was to be destroyed."

WHEN in the course of their deliberations the peace commissioners at Paris reached the subject of the "control, disposition and government of the Philippines" expansion again became a leading question of the day in the United States. At Worcester, Massachusetts, Senator Hoar recently delivered a speech which has been published far and wide as the strongest anti-expansion utterance yet made. In part he said:

"This year has been crowded with history and crowded with glory. It is also, to my mind, crowded with danger. The flag of Spain, formerly the proudest power on earth since the day of the Roman empire, has gone down in darkness and in blood before the victorious navy and army of the United States. The flag of the United States has arisen in the eastern sky like a new constellation.

"Let us not accept the duties and responsibilities of this victory in any temper of vulgar vain-glory, still less of a vulgar greed of power or of gain. The United States

comes to these oppressed people, east and west, as a great deliverer. The American people are not talking or thinking to-day, unless I misunderstand the temper of my countrymen, of what they are to gain, but of what the people they have delivered are to gain. To deal with this great occasion by talking about coaling-stations and trade advantages degrades and belittles it. We have not overthrown Spain, we have not periled the precious lives of our sons, that we may add to our possessions, or that we may make money out of our new relations.

"But yet the first duty of the American people is to themselves. And when I say this it is in no spirit of selfishness or of indifference to the welfare of mankind. On the contrary, I believe that the highest service the American people can render to mankind and to liberty is to preserve unstained and unchanged the republic as it came to us from the fathers. It is by example and not by our guns or by bayonets that the great work of America for humanity is to be accomplished. And, in my opinion, we are to-day in a great danger—a greater danger than we have encouraged since the Pilgrims landed at Plymouth, save only the danger that the slave-holding rebellion might succeed.

"The danger is that we are to be transformed from a republic founded on the Declaration of Independence, guided by the counsels of Washington—the hope of the poor, the refuge of the oppressed—into a vulgar, commonplace empire founded upon physical force, controlling subject races and vassal states, in which inevitably one class must forever rule and other classes must forever obey.

"I for one am not dazzled by the example of England. The institutions of England which have enabled her to govern successfully distant colonies and subject states are founded, as Mr. Gladstone pointed out, on the doctrine of inequality. If we are to outstrip England in national power it must be by pursuing our own path, and not by following in hers.

"My colleague, Mr. Lodge, made last night in Boston a sober, temperate and most admirable statement, with every word of which I agree. He declares that he will not turn the people of the Philippine islands back to Spain; that he will not hold them as a conquered people, at the cannon's mouth; that he will give them a chance to be free; that he will give them a chance to govern themselves; that there shall be order in those islands instead of anarchy; that they shall have peace and the opportunity to decide their own fate.

"Now, if this be imperialism, then, unless I have misunderstood the temper of the people of Massachusetts, and have failed to read her history aright, we are all imperialists. That is one thing. Freedom from Spain, opportunity for self-government, the restoration of error in those islands—support, countenance, assistance to that newly delivered people—these things are all right.

"These are imperial arts and worthy thee."

"This is one thing. We will emancipate this maiden; we will make her, if it be necessary, a wedding present and help to give her a dowry. But we will not make her our slave, and certainly we do not propose to marry her.

"The cry that we have outgrown Washington; that the old foundations can no longer support our temple; that the doctrines of the Declaration of Independence and the constitution of Massachusetts are not eternal verities, but only the make-shifts of a generation; that they are for little countries and not for large ones; that the policy and the destiny of this people are to be better settled in crowded assemblies, with shouting and clapping of hands and stamping of feet, than they were of old in the quiet chamber where Madison and Hamilton sat in council; that the flag stands for trade and dominion and not for manhood and self-government; that Washington lived and that Lincoln died only that we might have another Rome or another Spain; that Spain has so revenged herself upon us as that her spirit and ideals have entered into and taken possession of us—these things shall never happen while America is America, and while Massachusetts is Massachusetts."

In the clearer vision of the younger Lodge are none of the fears of the elder Hoar. In fact, they stand on common ground; only imaginary danger separates them. Imperialism as defined by Lodge—which is indorsed by Hoar—is the imperialism of the new America.

Spain has had America's example a century, but in a hundred days America's guns at Manila and Santiago accomplished more for humanity. There is no danger that the physical force used by America to free Cuba and the Philippines will hold as serfs the Filipinos and Cubans.

A RECENT report of the Director of the Mint gives the world's production of gold and silver for the calendar year of 1897. The world's production of gold was 11,480,000 ounces—in value, \$237,504,000. The world's production of silver was a little over 191,000,000 ounces—worth, at the present price of 60 cents an ounce, \$114,600,000. In gold production South Africa led with fifty-eight and one third million dollars; the United States was second with fifty-seven and one third million dollars—nearly one fourth of the whole; and Australia was third with fifty-five and three fifth million dollars. The world's annual production of gold is double what it was ten years ago.

NICARAGUA, Salvador and Honduras have formed a union under the name of the United States of Central America. Provision is made for the admission of Costa Rica and Guatemala, if they elect to join the union. The former independent republics become states of the union under a federal government patterned in many respects after that of the United States. The first election for president will occur in December; the first Congress will meet next March. At this time there is a special interest in this political change on account of the revival of the interoceanic canal project. The concessions already granted by Nicaragua will hold good, but the control of the canal route has passed from that country to the new union. The canal concessions, however, were recently extended. Just before the new order of things under the union went into effect Nicaragua made an agreement with an American syndicate authorizing it to construct the canal and empowering it to succeed the present Maritime Canal Company, whose contract expires in October, 1899.

Regarding this agreement "Bradstreet" says:

"The time fixed for the construction of the canal is ten years after the organization of the company, and other periods are fixed for the construction of different sections in a satisfactory manner. It is provided that the contract may be annulled if the company is not organized in the time fixed, or if there is failure to make the loans contracted for, or if the work is abandoned for three consecutive years. The company is to be exclusively American; the neutrality of the canal is to be forever maintained, free ports are to be acknowledged, and vessels and cargoes passing through the canal are to be free from taxation. The company is to be organized with a capital of not less than \$100,000,000 of stock, of which the Nicaraguan government is to receive eight per cent. The company, however, is to have the right to issue any further amount of stock and any amount of bonds that it may deem proper.

"It is expected that the formation of the new syndicate, in view of the new conditions brought about by the development of trade with the far East and the beginning of the expansion of the United States, will give a fresh impetus to the project of constructing a canal to join the two great oceans. Such a waterway has long been the dream of both statesmen and men of business with a wide outlook, but, like many another project, it has been obliged to wait until the pressure of conditions seemed not so much to render it advisable as to make it necessary. Perhaps such a stage has been reached in regard to the Nicaraguan canal project; at any rate, the progress made with it from this time forth will be watched with a degree of interest such as it has not hitherto attracted."

## FARM AND FIRESIDE

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## ABOUT RURAL AFFAIRS

**A Note on Ginseng** I like to see people progressive and easily enthused over the prospect of new horticultural and agricultural possibilities. Yet a long experience in trying the new things that are recommended to us in glowing colors, and with a good deal of plausibility, enthusiasm or evident candor, has taught me that we must mix a generous measure of caution and likewise of good judgment with our love of progress. It is only for this reason that I have tried to put something of a check on high-strung anticipations in regard to the outlook for ginseng culture. In fact, the methods employed by those like Mr. Stanton, who has tried to boom ginseng-growing as a new and exceedingly remunerative industry, have never inspired me with much confidence. It was apparent that these pioneers in the business wanted to sell us seeds and plants, and that therefore they were financially interested in booming ginseng. This seemed only a parallel case with the nurseryman who booms a new variety, and of course tells all of its good points, but carefully avoids saying a word about its faults. Even now I do not feel justified in advising anybody without experience in ginseng culture to plant very extensively. It would not be a safe thing to do. On the other hand, I gladly quote the following from a note written by Hon. C. C. James, deputy minister of agriculture of the province of Ontario, to the Canadian "Horticulturist." He says: "Dr. Geo. C. Butz, horticulturist of Pennsylvania state college writes me that he has visited Mr. Stanton's place and found there the most decided demonstration of the possibility of the cultivation of ginseng." Nobody will be more pleased than myself if my earlier suspicions shall be found to be without cause, and if the culture of ginseng shall really develop into a profitable industry that will turn the skill of at least a few of our soil-tillers into a new and remunerative channel.

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**Fattening Hogs** By writing this paragraph I hope to do a great favor to many hogs in the country, and of course to their owners as well. The common prac-

tice of fattening hogs by stuffing them with whole corn is not only sinfully wasteful, but also a violation of every principle of nutrition, and, therefore, of common sense. Friend, do you know that you would much better bury a large portion of the whole corn, whether shelled or on the cob, which you are throwing into your hog-pen now, directly into your manure pile than use it in the way you do? Do you know that your hog is, or soon will be, suffering from chronic dyspepsia? Haven't you noticed that even the tremendous digestive powers of the hog are insufficient to digest all the corn which you are stuffing into the animal, and that much of it is passing right through into the manure? If you have not noticed it you must be a poor observer indeed. You can save a large portion of your good corn, and have a better and healthier hog besides. Even if you do nothing but feed less of it you are doing a kindness to your hog, and save unnecessary expense to yourself. There is nothing in corn alone that makes blood or muscle. By giving an exclusive corn diet you must stop the growth of the hog, except in so far as you make fat and lard, and in this process you use up blood and muscle already made. If continued long enough (say a hundred days) this exclusive corn diet will and must surely kill the animal. The latter simply dies from starvation—in other words, from lack of blood—and this just as surely as if it were stuck with a knife.

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**A Good Ration** To judge from things I have written and published before some of my readers may take me to be opposed to pork as even an occasional diet for human beings. It is true I do not like a steady diet of fried pork. It is equally true that I never (hardly ever) buy pork in any shape from the butcher. I want at least to know what I am eating, and before buying pork I would want to know where it was grown and especially how it has grown. On the other hand, I do grow and butcher hogs, and I enjoy my occasional dishes of pork, cooked in various ways, of home-made sausage, of ham, etc., as much as anybody. There are great differences in pork, however, being due, undoubtedly, to the different ways of feeding hogs as well as of putting up and cooking the pork. I have never failed to have nice, sweet pork and hams and the best of sausage. Good recipes for salting and pickling pork and hams, etc., have been given in these columns before, but no way of "curing" will convert a poor quality of meat into a first-class article. In short, in order to have a really good ration on your own table you must begin by feeding your animals properly. For that purpose the exclusive corn ration is out of the question. To have a healthy hog we must give it a chance to make blood and muscle as well as fat. Our best muscle-forming materials are bran, beans, peas and oil-meal. The last-named I have not tried for hogs except in very small quantities. The most satisfactory way of fattening hogs, and poultry of all kinds as well, that I have ever found is by cooking pumpkins, squashes, small potatoes, apples, roots of all kinds, and, in fact, any waste vegetables or fruits that may be available for the purpose, and stirring into this mess enough corn-meal, pea-meal, bran, etc., as seems required to make a suitable ration; that is, rather stiff and crumbly for poultry, and more liquid for hogs. The mess for the latter may be made of molasses consistency by adding skim-milk where that is obtainable. The best pork that I ever produced, and the finest and fattest fowls and turkeys that I ever shipped to market, were fattened on a ration of this kind, the grain portion of it consisting of about equal parts of corn and peas, ground. It should hardly be necessary to say that for economy's sake the fattening process must be begun early in the fall, and, if possible, finished before severe cold weather. Grain goes farther in moderate weather than during the very cold days and nights of midwinter. My hogs are quite fat already (middle of October), in fact, almost good enough for the butcher. There was a lot of sweet corn left in the patch. It got too old for use or market because it was just right when our markets were overstocked with sweet corn. I began at once to feed it to my hogs, very lightly at first, then crowding it on a little heavier, together with other stuffs, including a lot of old white beans. Of course, the latter were thoroughly cooked. The hogs now are fine, and it has cost me very little to fatten them. Should these remarks result in making one out of every ten of my readers who fatten hogs change their methods in the direction pointed out they will have served the purpose spoken of in the beginning.

## Wintering Hogs

I usually buy some pigs in the fall, of course selecting good stock. There are lots of farmers in this vicinity who make a business of raising pigs for sale, so that the buyer who comes early has a good deal of choice. Any good breed will do me. The buyer should have his eyes open. These fall pigs make good hogs for killing next fall or early winter. I find that pigs like clean and dry quarters and plenty of bedding. Plenty of milk, sweet or sour, makes happy and thrifty pigs if you only keep them warm and dry. Batten the cracks of the pig-pen to keep out the icy winds and the snow. Many of my readers have a supply of beets, carrots, etc., stored up for feeding cattle during the winter, and some have artichokes, apples and other things available for the same purpose. Do you know that swine are very fond of these foods, and that liberal quantities may be given to them with decided benefit? Roots are excellent for brood-sows, too, and may be fed either in the raw state or boiled. They are a cheap ration and tend to keep the animal in good health.

T. GREINER.

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## SALIENT FARM NOTES

**Pork Production** F. D. Coburn, secretary of the Kansas state board of agriculture, has dropped into the very pleasant custom of sending me copies of his quarterly reports. The latest is entitled "Pork Production," and to say that it contains a large fund of valuable information on this subject is putting it very mildly. At the head of the first page of cover is the following tidbit, which is as pleasing to one sense as a slice of cold boiled ham is to another:

"Vegetarians have inveighed against eating pork, and theologians have pointed to the warnings of Moses and the sad fate that befell the swine of Gadara; but he has hardihood, indeed, who can inveigh with sincerity and real earnestness against the juicy ham or delicious side-meat of a well-bred hog reared on alfalfa, the blossoms of clover, the sweet skim-milk from the dairy, and finished on the product of a Kansas corn-field."

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The many experiments in profitable and unprofitable pig-feeding recorded in this excellent report are grand pointers for the thousands of farmers who are striving to produce the best and most pork at the least cost. For instance, we find a record of four trials with pigs, three lots of them, two of which ran on blue-grass pasture and the third being yarded. These trials lasted twelve weeks and were conducted under such conditions as are usually found existing on the ordinary farm. The first lot were fed full feeds of corn during the whole time; the second lot half feeds eight weeks and full feeds the last four weeks, while those in the yard were fed corn exclusively, all they would eat. With the first lot 507 pounds of corn made 100 pounds of pork; with the second lot 441 pounds of corn made 100 pounds of pork, while those kept in the yard without grass required 629 pounds of corn to make 100 pounds of pork. These trials show plainly the disadvantages under which the average tenant-farmer who has no pasturage for his pigs labors in rearing and feeding pigs for market. They show that he must feed 188 more pounds of corn to make 100 pounds gain than his neighbor who is able to fence in a good pig pasture. They also prove that the idea of building up the pigs' frame with grass and about a half feed of corn, and then finished and filling up with full feeds of corn for a few weeks, is the correct one. This is the plan followed by intelligent farmers who have made a great success of raising and feeding hogs.

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Another experiment with a lot of pigs shows the weekly increase in weight from birth to maturity. At birth they averaged 2.5 pounds; at the end of the fourth week, 12.5 pounds; eighth week, 27.8 pounds; tenth week, 38.5 pounds. When these pigs reached a weight of 78 pounds each they gained seven per cent of their live weight in one week. At 128 pounds they gained six per cent in one week. When they reached 226 pounds the gain was four and one tenth per cent, and at 320 pounds the gain was only three and one tenth per cent. This experiment shows the utter folly of holding and feeding pigs after they reach the 200-pound mark. Thousands of our most successful feeders have learned by experience that about 200 pounds is the limit of profitable feeding, and yet there are thousands of soil-

tillers who delight in big hogs—who hold on and feed until they get 400-pound porkers, never even dreaming that they are losing money every day.

\*\*\*

Said a very successful pig-feeder: "The reason why I like spring pigs is because I can grow the frame of the hog I want very cheaply on grass and a little corn during the summer months, and when the cool days of autumn come on I can finish him up—fill him with fat and round him off smooth and nice in a very short time with corn—and get rid of him before snow flies." The man who possesses the facilities—has the necessary pasturage—to enable him to follow this plan can produce pork a third cheaper than he who is obliged to yard his hogs the year around, while the danger of disease sweeping off his herd is fully fifty per cent less.

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Large numbers of the readers of FARM AND FIRESIDE are so situated as to be able to obtain large quantities of sweet skim-milk for feed, and to such the following experiment will be interesting: A veteran farmer and dairyman learned after a series of trials that a bushel of corn fed to shoats weighing 125 pounds would make 10 pounds of pork, and that 100 pounds of skim-milk would make 5 pounds of pork. He decided to have the corn ground to meal and mix it with the milk, and the result was a gain of 18 pounds of pork, a clear gain of 3 pounds as a result of the mixing of the two foods. After an experiment in making pork in winter in the state of Wisconsin the experimenter gives this bit of advice, which is applicable to every state in the Union: "Do not expect to produce cheap pork in the winter unless the pigs have warm, clean, dry and well-ventilated quarters to sleep in."

Experiments in feeding cooked and uncooked grains and meals to pigs in Kansas, Iowa, Wisconsin, Ohio and Canada give the following results, which will surprise a great many small feeders: "The average of all the trials made show that 476 pounds uncooked made 100 pounds gain, while 505 pounds cooked was required to make the same gain. In the Kansas experiment 749 pounds of cooked shelled corn were required to make 100 pounds of pork, while 630 pounds uncooked made the same amount. When we add cost of fuel and labor, clearly it is a losing business to cook food for swine."

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S. M. Shepard says: "Don't take the poor young sow that is nearly exhausted by nursing a litter, and turn her upon grass food, without grain, and expect her to recuperate and grow to matronly beauty. It never has and never will be done, and the breeder who expects to succeed must give the sow something more than pasture."

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James Riley, a prominent breeder in Indiana, says: "I regard a sow that has had the cholera and fully recovered, if it has left her a breeder, as very valuable. I never knew a hog that had the genuine cholera and full recovered ever to take it a second time." He says he has a sow seven years old that had the cholera badly when one year old. She fully recovered and farrowed four litters of ten pigs each in two years, and raised them. She has raised two litters each year since, and never less than nine pigs in a litter. All of her pigs have proved strong and vigorous. She has gone through the cholera twice since and did not take it.

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Brother Coburn says of the Kansas hog: "Here he attains the qualities which make his flesh a delicacy sought of epicures in Occident and Orient, no less than a fit and staple ration for men of heroic undertakings, iron nerve and cool brains like those who, at Manila and Santiago, fired the unerring shots that wrenched loose the props of a throne, revised the world's map, and replaced tyranny's flag with 'Old Glory.'" Let me add that the hog of several other states is thoroughly "in it" with the Kansas rooster.

FRED GRUNDY.

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## FARMERS' NATIONAL CONGRESS

The eighteenth annual meeting of the Farmers' National Congress will be held at Fort Worth, Texas, December 6-14, 1898. For circulars of information and for programs of the meeting address John M. Stahl, Secretary, 4328 Langley Ave., Chicago, Illinois.

# OUR FARM

## FARM THEORY AND PRACTICE

**OHIO CORN AT TWENTY CENTS.**—Some Ohio farmers are drawing their corn to market, selling at twenty cents a bushel. I cannot see the wisdom of such a course. Such a price for corn delivered in market is below the cost of production on Ohio farms, and

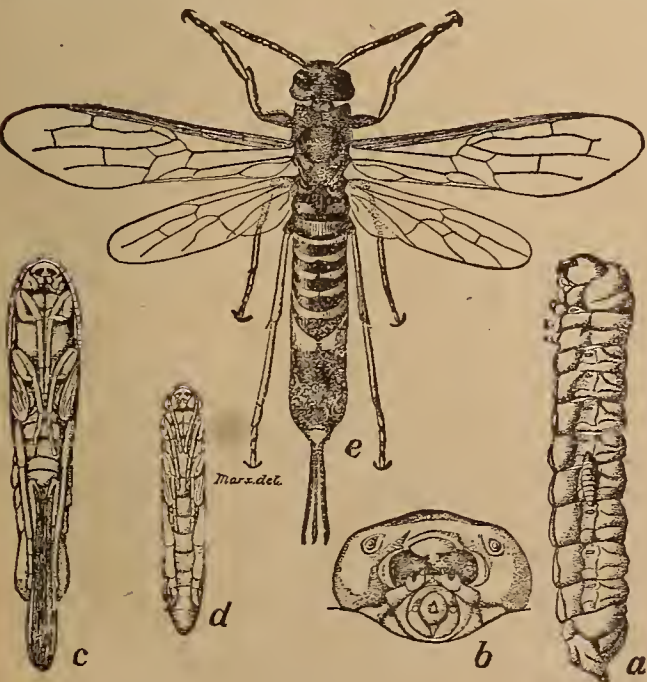


**FIG. 1**  
The Long-tailed Ophiou (*Ophiou macrurum*)—a, adult; b, maggot (After Riley)

past experience indicates that it would pay to crib this corn if it cannot be fed out to stock with profit. In the West conditions are different, but the owners of Ohio farms simply cannot afford to drain their soil of plant-food, paying taxes upon high-priced land, and sell corn at the low price named. Nine times out of ten such corn could be fed with some profit, the fertility being retained upon the farm; in any event it can be cribbed without any danger of serious loss and with every prospect of substantial profit from storage. Dumping corn upon the market in our north-central states at a figure below the actual cost of production, when everything is taken into account, is bad not only for the man that produces and sells the corn at the low price, but for all farmers and farming. It accustoms the public to prices that are unreasonably low, and breaks down faith in better prices. When there is little risk of loss, and fair chance of profit from holding, the fertility of Ohio soils should not be sent from the farms at prices that would prove disastrous in a long series of years.

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**THE SEASON FOR WHEAT.**—I have never known a better season for seeding to wheat than the present one in the greater part of the Ohio valley. Scattered reports indicate that the acreage has been materially increased, and the prospect this fall is exceptionally good, except in limited areas where very early seeding was caught by the fly. But the success that attended late seeding



**FIG. 3**  
The Pigeon-horn-tail (*Tremex columba*)—a, larva, showing *Thalessa* larva attached to side; b, head of larva (enlarged); c, female pupa; d, male pupa; e, adult female. All slightly enlarged (After Riley)

last fall is exerting an influence upon some growers that may involve them in loss. The drought delayed seeding, but an exceptional winter made a fair harvest possible. Said one farmer to me recently, "That field

was seeded the first of November last year, and made my best yield, and I guess I shall sow another field yet this fall, even if it is late. It may be my best wheat." Yes, it may be, but the chances are that very late seeding will prove an unprofitable venture for the next ten years. It does seem difficult for some men to remain uninfluenced by an exceptional success or failure, and to stick closely to a rule that is based upon the average of many years' experience.

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**THE GROWTH OF WEEDS.**—The wet weather of July and August made an extraordinary growth of weeds. Corn and potato fields that were left clean when cultivation ceased at the usual time became veritable weed-fields in many instances. It is such a year as this that seeds the land afresh with weeds unless one makes a vigorous fight. In an ordinary season many careful farmers prevent the seeding of weeds by cultivation and some extra hand-work after cultivation ceases, and in a year like this one they lose their grip and let many kinds of weeds re-seed the ground. In the meadows the winter annuals and perennials are starting freely, and many a field cannot make a clean crop of hay next harvest. Close watching reveals these tiny weeds that would make a big show next year, and the breaking-plow is the sure remedy for them. Some such fields should have gone into wheat, and some should be broken for corn. Foul hay is utterly unprofitable, and a wet summer usually means foul hay the next year unless care is used. In the Ohio valley the steel-weed gains ground yearly. It is a perennial, growing from the same root-stock each year and making seed very freely. Sheep eat it to some extent, but mowing does little good. Fields are now white with the second bloom. Cultivation is the only practicable remedy, and should be employed conscientiously.

**THE FUTURE.**—Notwithstanding blights and weeds the prospect ahead of us farmers has brightened in many ways. The revival in the live-stock industry means much to Ohio farmers. There is a demand for all classes of stock, and that means less drain upon the soil of the state, less cultivation of thin land and a return to safer lines of farming for the great majority. Farming without stock is not unsafe farming for those who plan aright and work the plan out carefully, but there is more risk in such farming than in the old-line mixed farming that includes the grazing and winter feeding of stock. There is less indebtedness than formerly, I think, and greater ability to pay cash as we go, and therefore buy supplies for the least money. If our large corn crop is held off the market at present low prices, being stored for a time or fed to stock, if the present prospect for wheat continues until harvest, and if the amount of live stock is gradually increased, we should remain upon safer lines than we were a few years ago. It is true that economy is going to play an important part in any success we may secure, but that is true of all business ventures to-day. Just laws, good planning and hard work can secure a good measure of prosperity to the American farmers.

DAVID.

## DO NOT KILL THEM

### CHAPTER V.

#### INSECT PARASITES

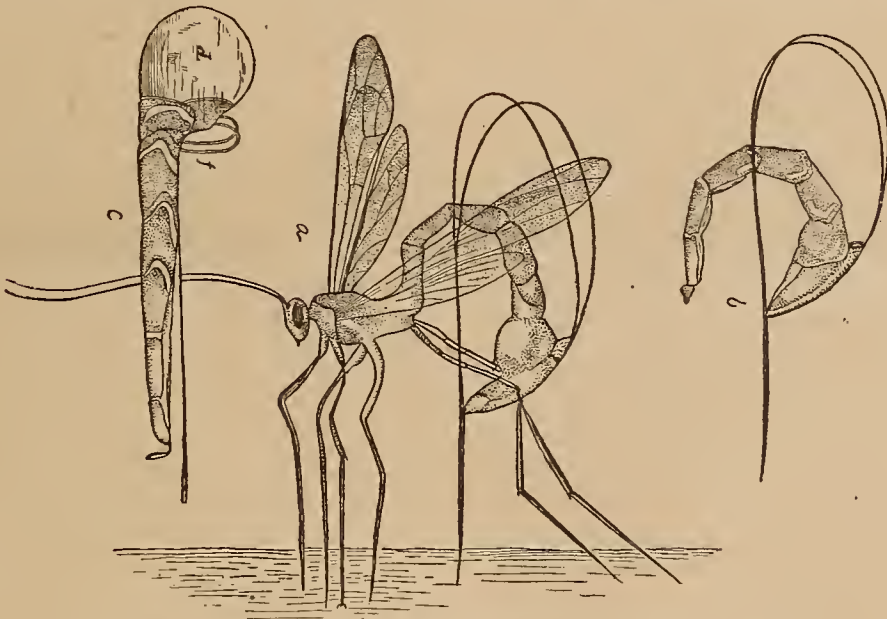
Though large numbers of injurious insects are annually destroyed by those which are purely predacious upon them, many more succumb to those minute forms which live parasitically within them. A few of these parasites belong to the order Diptera, or true flies, but most of them are classed in the order Hymenoptera, in which order are also included the saw-flies and slugs, ants, wasps and bees, and belong to a group known as the Parasitica.

Of the half-dozen families comprising this group, one of the largest and most beneficial is that of the ichneumon-flies. The illustrations will best show the form and structure of these insects, which the casual observer would hardly be able to distinguish from other families of the group. But it will be noticed that the fine veins of the wings vary considerably in the different parasites figured, and it is by these that the entomologist is enabled to separate the different groups and often to identify the species by a glance. Both this and the following family are peculiar in having exceedingly long ovipositors, or egg-tubes, of which it will be seen that they make a very good use. It is with this extensible tube that the female



**FIG. 4**  
Cocoons of *Microgaster* parasite on a Sphinx larva (After Riley)

deftly punctures the skin of some unsuspecting caterpillar, and under it inserts her eggs. In a few days there hatch from these a host of young maggots, which feed upon the inner juices and tissues of the caterpillar,



**FIG. 2**  
A "Long-tail" (*Thalessa lunator*)—a, adult ovipositing; b, c, ovipositors (After Riley)

but are seemingly careful to avoid injuring any of its vital organs, for as soon as it reaches full growth it changes to the chrysalis, or pupa, apparently unaffected. But now the maggots have reached their full size, and each spins up a small silken cocoon inside of the chrysalis, entirely filling up its now dead shell, and instead of a beautiful moth or butterfly appearing in the spring a round hole in the side of the chrysalis, or cocoon, and a horde of small flies form the unhappy condition of its career.

Thus large numbers of such pests as the apple-tree tent-caterpillar (*Chisocampa americana*), bag-worms (*Hemiteles thyridopteryx*), caterpillars of the swallow-tailed butterflies, which feed on parsley, carrots, etc., and others are consumed by members of this family.

Those belonging to the genus *Ophiou* are partial to the large American silkworms, which produce some of our largest and most beautiful moths, and I have frequently found difficulty in rearing a desired number of moths on account of the large percentage of cocoons parasitized.

One of the most interesting forms and the largest of the group is one of the so-called "long-tails" (*Thalessa lunator*), and surely this is an apt name, for the female's ovipositor extends for a length of three or four inches beyond the body, and appears much like a couple of large bristles. But an examination shows that it is really composed of three pieces, which together form a tight tube, and at the end of which is a file-like arrangement by which it can be forced for its full length into the hard wood of such trees as the hickory, ash or maple. Now, the larvae of this insect are parasitic upon a wood-boring grub known as the pigeon-horn-tail (*Tremex columba*), and the manner in

which the female, *Thalessa*, detects the presence of their burrows through three or four inches of solid wood is truly marvelous. Nevertheless, she accurately locates the grubs, and with great care and pain forces



**FIG. 5**  
A Plant-louse Parasite (*Aphidius grauariphs*) showing above the parasitized louse from which it has issued (Copied from T. B. S.)

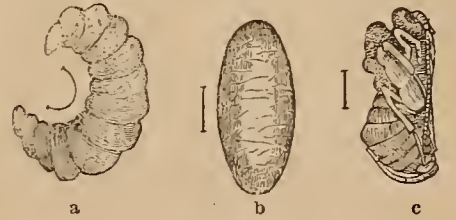
her ovipositor through the wood and lays her eggs in the burrows so that the young larvae may fasten themselves to the grubs as soon as hatched.

The species of the family Braconidae are very similar to those of the preceding one, and contain some equally beneficial insects, feeding as they do upon such pests as the codling-moth, web-worms, plum-curculio grubs, plant-lice, etc. Some of the more common forms of this family belong to the genus *Microgaster*, and their small white cocoons may frequently be seen almost covering one of our large tomato or tobacco worms, the pupae of which are here known as "horn-blowers." Many a farmer mistakes these cocoons for the eggs of the worm, and therefore destroys some of his best friends. Though some thus spin their cocoons on the outside of the host, others remain inside of the parasitized insect until the adult fly emerges. Thus dead plant-lice may very often be found with a large round hole in the abdomen—the only evidence of where one of these parasites has emerged. For this reason it may be followed as a general rule that dry, shrunken plant-lice should never be destroyed.

The chalcid-flies, which comprise another closely related family, are exceedingly minute insects, sometimes not over one one-hundredth of an inch long. They are generally of a metallic black color, and the usual veins of the wings are almost entirely absent. Many of these flies are parasitic upon plant-lice, while a large number of their larvae live and mature in the eggs of other insects.

Very similar to the chalcid-flies in their habits of infesting plant-lice and insect eggs are some even smaller insects—in fact, the smallest known, the largest being rarely over one twenty-fifth and the smallest only six or seven one-thousandths of an inch in length—with a correspondingly tremendous and unpronounceable name, known to science as the Proctotrypidæ.

But enough has been said to indicate the important part which the immense borders



**FIG. 6**  
A Parasite of the Plum-curculio (*Sigalphus curculionis*)—a, larva; b, cocoon; c, pupa (After Riley)

of these apparently insignificant insects play in the economy of nature, by often clearing off a most dreaded farm pest in a few days almost as if by miracle.

E. DWIGHT SANDERSON.

## A NOTE FOR DAIRYMEN

In a recent visit to Toronto, Canada, the following notice was observed in an attractive-looking dairy. It was neatly printed upon a card hanging in the window.

MONTHLY INSPECTION JUST COMPLETED.

Pasture short, owing to dry weather, but cattle get grain night and morning.

Cows all healthy and in good condition.

X. Y. Z.,

Veterinary Surgeon.

The proprietor assured me that his business has increased about fifteen per cent since he first commenced posting these monthly notices.

M. G. KAINS.

## OUR FARM

### NOTES FROM GARDEN AND FIELD

**THE MEXICAN STRAWBERRY.**—A reader in Mount Hope, Wisconsin, asks about the results of my trials with the Mexican strawberry, of which I spoke in these columns about a year ago. This is strictly a bush variety, like the one sent me two or three years ago by Mr. Nimon, of Texas, through my good friend, Mathew Crawford, of Ohio. Possibly it is one and the same variety. It is called an "everbearing" sort, I believe, and perhaps with some justification. The plants here have not made a single runner, but bloomed freely in and after the regular strawberry season, and I had some fruit from them at various times. The plant resembles our ordinary strawberry-plants in appearance, and the fruit is of good size. Yet, after all, I cannot concede much practical value for my locality to this new wonder, whatever it may do in Mexico, southern California or any other place. I do not know what Mr. Crawford thinks of it. I shall be pleased to hear about it from these two strawberry specialists, Mr. Crawford and Mr. Nimon. Gentlemen, you have the floor.

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**A GINSENG REPORT.**—Mr. Jefferson D. Cheeley, of Marion county, Ill., remarks on ginseng, and says: "On a plat equivalent to twenty by twenty-five feet I have grown thirty-six pounds of the green roots from the seed in three years. The thirty-six pounds would have cured twelve pounds. The twelve pounds at the price my local merchant pays—namely, \$1.50 a pound—would have brought the neat little sum of \$18. If sold in the city at city prices it would easily have brought \$40. I sold it, however, for planting, and got \$120. But even \$6 a year for a plat twenty by twenty-five feet is pretty good pay. My scale is diminutive, it is true, but I am pleased with the result of my little venture, and would have been bad I been compelled to cure the roots and sell them to my local merchant. Moreover, I have learned what can easily be done on a quarter acre, or on a whole acre, for that matter."

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**SUGGESTIONS AS TO GINSENG CULTURE.**—My friend opposes the idea that ginseng is "a crop only for those more skilled than the average soil-tiller." He says: "As you intimate, a rich, moist, loose soil is required. It seems to me any farmer could comply with that requirement; for if he has not already such soil he can make it by applying manure and wood-ashes. Ginseng, as you say, must have shade. It must have mulch, also. If there is no forest or orchard to make the beds in, it seems to me any farmer could easily make frames for a few beds. Straw or hay or any other litter could be put on these frames just thick enough to make shade. Forest leaves, straw, hay or other litter could be used as mulch. The shade and mulch combined is just what the 'sang' needs, and weeds will not grow, either, because of the mulch and shade. And who ever knew the soil being otherwise than rich, moist and loose when under the protection that mulch and shade afford? If more than a few beds are wanted, peach-pits might be planted four by four feet apart, and the trees resulting therefrom will quickly cover the ground and make good shade. Nothing about this that is difficult. With these conditions complied with no culture is needed. Simply renew the mulch late in the fall."

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I am well aware that any farmer can supply the conditions needed to grow mushrooms. It is the simplest matter in the world to grow fine celery or the large perfect onions that I throw on the market every summer and fall. But the average soil-tiller does not produce these things, or if he makes the attempt he usually makes a failure of it. All these crops, simple and easily supplied as may be their requirements, call for the exercise of more skill than is usually possessed by the average farmer. Whoever knew the latter to grow crops that need mulch and artificial shading, or that require special soil conditions? The very fact pointed out again by my friend that "sang" thrives only under such special treatment (or under natural environment supplying such conditions) proves conclusively that it is "a crop for those having more skill than the average soil-tiller." For those among my readers, however, who may wish to try ginseng (and I hope many will

do so) the suggestions above given will prove of great help. I shall make some trials on a small scale myself. And finally, I would like to hear from those who have grown "sang" and cured and sold the roots in the regular markets. I do not doubt that it will pay to grow the plants or the seed for planting when you have sale for these things at going prices.

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**MORE ABOUT THE HONOR BRIGHT.**—A. W. Livingston's Sons (or rather their successors) write me as follows about the Honor Bright tomato, introduced by them last spring: "In regard to blight, we have found it freer from this disease than almost any other sort in our grounds. In fact, we have been delighted with its behavior throughout the season. The fact is, it has done better than any other sort we have ever introduced. We have made some experiments in saving pulp, such as canners use for making catchup. The Honor Bright gave us from nine bushels the same quantity which we obtain from twelve bushels of such varieties as Livingston's Stone, Favorite, Paragon, etc." If I said anything about its blighting on my grounds I should have stated that the disease seems to be confined to the older (lower) portions of the foliage, and that, blight or no blight, the Honor Bright has given me an immense crop of the very best tomatoes.

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**SALAD-PLANTS FOR WINTER.**—Besides lettuce, which, of course, remains our mainstay for winter salads, I like to have some cresses with which to add something of pungency and spicy flavor to the former. Ordinary cress and water-cress come equally handy for this purpose, and both are easily grown. For most people, whether they have greenhouse facilities or not, the ordinary cress, however, is undoubtedly what they want. It may be grown in large flower-pots or in boxes without much trouble. Fill the box or pot with rich soil, and sow seed rather thickly. In a few weeks you will have quite a picking, or rather cutting. Keep a few such pots or boxes going, by sowing seed every week or so, and you will have something that must please company as well as yourself.

T. GREINER.

### TO HAVE FRUIT KEEP WELL

In case of small fruit-growers, or those unable to secure the use of regular cold-storage, proper manipulation of a frost-proof cellar or fruit-house room will do much toward lengthening the fruit season. The things most to be observed are to see that the temperature of the room is at all times kept as low as possible without freezing its contents, and that no sudden or great changes occur in the temperature. Nevertheless, there are many people who put fruit and vegetables into their cellars, and, having closed up the whole tightly—sealed it, as you might say—give it no further attention until spring. In nine instances out of ten the contents of such cellars spoil.

Providing freezing weather has not yet arrived, the proper way to do is to open the doors and windows when the air outside the storage-room is colder than that inside; but the moment the inside temperature has reached that of the outside every door and window should be promptly closed. Have a thermometer outdoors as well as one inside the storage-room, and if the day bids fair to be sunny, allow the air to circulate only during the early morning, closing up the whole before the sun gets very high. All this is quite a little bother, to be sure, but by it one is amply compensated in having his fruit keep to perfection all through the winter and far in spring.

A good cellar must be had to secure the desired results, however, and this not every one possesses. What, then, is to be done? Oh, nothing much, except to provide the requisite kind of storage-room above ground. This can be easily achieved, and reasonably, too, simply by constructing it on the plan of an ice-house. To prevent the possible entrance of moisture the floors should be of cement; then the walls ought to be double, and the space between them no less than a foot thick, this to be filled in with sawdust, while over the ceiling there should be a layer of the same as thick again. By having double doors and a small ventilator which extends up through the roof so constructed that it can be controlled at will the same precautions can then be observed as in case of the cellar, and, best of all, with just as good results.

FRED O. SIBLEY.

### TO CURE A COLD IN ONE DAY

Take Laxative Bromo Quinine Tablets. All druggists refund the money if it fails to cure. 25 cents. The genuine has L. B. Q. on each tablet.

## ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

**Fertilizer for Peach-trees on Light Soil.**—E. J. O., Monson, Mass. Probably there is no better fertilizer for the peach on light land than good stable manure, but if this is too expensive you had better use dry ground fish and potash, ground tankage and potash, or similar fertilizers containing considerable nitrogen and potash. A good fertilizer is made by mixing 250 pounds fine ground bone, 100 pounds high-grade muriate of potash and 50 pounds sulphate of ammonia or nitrate of soda.

**Propagating the Evergreen Blackberry.**—M. T. P., Williamsburg, Ohio. I have had no experience with the evergreen variety of blackberry, but think it will grow from root cuttings. These should be made by cutting off pieces of the roots four inches long. Bury them in sand over winter, and in spring plant them out, covering them completely one inch deep. Also I think they will sprout in the spring if you cut off some of the larger roots within a foot of the vine with a spade or similar tool.

**Manuring Raspberries.**—G. S., St. Mary's, Ohio, writes: "I have been told that manuring raspberries too freely will cause them to 'go to vine' and bear a small amount of fruit. Is this a fact?"

**REPLY:**—I have often manured raspberries of the various classes with stable manure and with chemicals, and always, I think, with advantage, but think that if you are getting a good growth of cane that there is little to be gained by using manures. Where barrenness has come from manuring I think it where manures containing too much nitrogen have been used and that this fault would generally have been remedied by the addition of potash.

**Plum and Peach Seedlings.**—M. D., Knoxville, Tenn. Plum-pits may be sown at once, but will seldom start the spring following if they have been much dried before planting, but will lie over in the soil one year before growing. Peach-pits should be made into a pile with sand on top of the ground, making it of alternate layers, three inches thick of peach-pits and sand. Make the pile three or four feet wide, about one foot deep and as long as necessary. Then cover the pile with sod, grass side down. In the spring sift out the sand, examine the pits, and crack with a hammer all that have not burst open; plant at once where they are to be budded, and bud them the following August. The plum seedlings I generally transplant when one year old and bud the following August, but they may be budded the same season that they are sown if sown thinly.

**Propagating Blackberries and Raspberries.**—J. I. S., Utah. Both blackberries and raspberries are divided into two classes by the ways in which they are propagated. One class in each section increases naturally by suckers, and the other by covering the tips of the canes in latter part of summer. Thus among raspberries the Cuthbert, London, Marlboro and similar kinds increase by suckers, and the Gregg, Sonhegan, Tyler, Nemaha and similar kinds by tip-layering the latter part of summer. Among blackberries the Kittatinny, Snyder, Lawton and similar kinds increase by suckers, and the trailing blackberries, such as Austin and Lucretia, by layering the canes the latter part of summer. The kinds that naturally increase from suckers and some of the others will also multiply if the roots are cut in the ground. Your plants must come within one or the other of these classes, and by a little observation you should be able to make out which one. Neither blackberries nor raspberries grow readily from cane cuttings.

**Beetles Girdling Pecan Branches.**—J. L. P., Alabama. The insect that is cutting the branches off of your pecan-trees is a grayish beetle, with long horns (Oncideres cingulatus). This beetle lays its eggs at the base of a bud or a bud scar in summer; this egg soon hatches and bores into the twig. Soon after laying an egg the beetle girdles the branch on which it is laid; the girdled branch dies slowly, but by autumn is quite dead and is broken from the tree by the winds of autumn, and thus finds its way to the ground, where the borer in it is protected by the fallen leaves during winter. In the spring the larva undergoes its changes and soon emerges as a beetle to continue the injury. In the case of small trees you might protect them from the beetle by spraying with soap, which is very distasteful to them, about the time they first appear, but in the case of large trees this would of course be impracticable. The best remedy would be the gathering and burning of the girdled branches soon after they fall, by which the larva is destroyed; but while this will not prevent injury to the present crop it will greatly lessen the injury to the crop next season.

**Baxter Apple.**—M. C., Klemme, Iowa, writes: "For the past two years farmers in this vicinity have been purchasing their nursery stock from a very high-priced firm in Minnesota. One or two of the farmers had doubts about the firm, so wrote to a farm journal in Minnesota to find out if there was

such a firm, and in particular, to ask about the "Baxter" apple they sell. They received the answer there was no such apple and they knew nothing of the firm. They claim this apple is an excellent winter apple, that it took several prizes at the World's Fair. I bought fifty apple-trees of different kinds from this firm one year ago. I planted my trees last spring, and they are the finest-looking young apple-trees in the county, but I do not know if I got what I ordered or not."

**REPLY:**—I have heard that the nursery firm which you mention does not have the best of reputation for sending out nursery stock true to name. There is an old English variety of apple called Baxter Pearman that is not now considered worth planting. These folks may have some good variety that they have named Baxter, but if this were so the pomologists of the country would probably know of it, which is not the case. I think they have probably adopted this name as a catch-penny, it often being easier to sell some highly landed new thing than good, reliable varieties of known value. In the experience of the experiment stations of the country not one new variety in ten sent out by seed-dealers and nurserymen has proven to be worthy of introduction, and people should go slow in buying high-priced novelties. You had better look upon your investment in apples as an experiment, and remember that it is much better and cheaper to buy from some good nursery direct than from agents of any kind. I do not know that this apple or one under this name did not take premiums at the World's Fair, but think it very improbable.

**Propagating Fruits—Strawberry Varieties—Alders—Fruit Book for Beginners.**—June-berries are naturally increased by seeds and suckers. Since they do not come true from seed this method of propagating for commercial purposes is of no importance. The customary way of growing them is from suckers, which they produce abundantly, especially if the roots are cut a little. Another way of growing them is by grafting the June-berries scions onto short pieces of apple-roots, putting the union well below the surface of the ground. Cranberries can be grown from seed, but they do not come true to name when grown in this way, and it is customary to grow them from cuttings, which root very easily in moist soil. To grow them from seed, the seed should be rubbed out of the berries in the autumn, mixed with sand, and buried outdoors. In the spring they should be sown in loose, rich soil of a somewhat peaty nature. They make a slow growth, however, and should remain in the bed or box in which they are sown for at least one year. Raspberries, blackberries, currants and gooseberries should be treated as recommended for the cranberries, except that they get big enough for transplanting the first year. Currant seedlings start very early in the spring of the year, and are liable to injury from late frosts. On this account, in growing such seedlings I prefer to sow the seed in boxes and keep them in a frame or greenhouse until they have made a pretty good start and all danger of frost is passed, when I plant them out. In this way I have had very good success in raising seedlings of these small fruits.—Strawberry-seed should be separated from the strawberries as soon as they are ripe, and sown in good, rich soil in boxes or frames, where they can be carefully attended to and kept moist. Treated in this way the seed will start within about two weeks from the time they are sown, and if transplanted, will make nice, vigorous little plants by autumn. Bnbach, Parker Earle, Haverland and Lovett are all good varieties for the home garden and make a very good combination. Haverland is a pistillate berry that is highly esteemed in many localities.—Alder-bushes can be obtained from almost any of the larger nurserymen in the northern states. I think that Ellwanger & Barry, of Rochester, N. Y., could undoubtedly furnish them.—I think that you would find "Aurateur Fruit Growing" a better book for a beginner.

### FARMER'S HANDY FEED COOKER

Reader's attention is called to this device, which is sold at \$12.50 for 50-gallon capacity. By feeding poultry and animals cooked food during winter at least one third of the feed is



saved; also having stock in a healthy condition, preventing hog cholera among your hogs and insuring the hens laying freely during the winter months. On application to the Empire Manufacturing Co., Quincy, Ill., a catalogue giving full description, may be obtained. They are made in all sizes.

# OUR FARM

## DAIRY-FARM LEAKS

**SCRUB COWS.**—Next to the scrub bull comes the scrub cow. The former is the greater leak because the sire is said to be half of the breed, and there is some hope from a scrub cow if she is bred to a thoroughbred sire from a milking strain of a good family; but when it comes to scrubs on both sides there is not much hope for any one. And yet not ten per cent of the sires or dams of the dairies in this state are thoroughbreds. In the cheese-producing counties but very few pure bloods are seen. Occasionally one finds herds of Holsteins or Ayreshires, and a thoroughbred of those breeds, but as a rule the cows are a mixture of three or four breeds, and the sire of at least two. Nearly all the calves are sold to shippers at the age of four weeks, the few saved being the best looking.

Last spring cows were scarce and buyers plentiful, and notwithstanding the fact that there was a surplus of fodder in nearly every barn, scarcely a farmer, when approached by one of these buyers, refused an offer of a few dollars above the usual spring prices for fresh milk-cows. They had fed and cared for them all winter; had an abundance of feed to carry them through the spring; pasture enough for the summer, and the cheese-factory or creamery, with open doors, was ready to make up and pay for the milk; but that offer of \$5 or \$10 extra above last fall's prices was the last straw on the camel's back. The offer was too tempting, so the cows had to go. Later, when the cheese-factory proprietor asked about the milk for the season, the reply was, "I dunno. I sold four or five of my best cows t'other day, and some of the others ain't goin' to cum on; they're farver, so I dunno how many I'll have in milk just yit."

About the same time the calf-buyer puts in his appearance, saying, "How about the calves? Going to let me have 'em this year? I'll pay you as much or more than any other man will. I've always had them, you know, and both of us have been satisfied with the deal, and I'd like 'em again this year. What do you say?"

"Well, I'll tell you. I dunno just yit how many I'll have. Sold some of my cows t'other day, and have found out that there's four more of 'em farver. Cows is going to be cows, I guess, for a year or two, and young stock's scarce, too. I'll have to raise four or five heifer calves if I keep up the number of my dairy; and I'll have to do that, 'cause about all the money in farmin' is in cows, if cheese is low. No, I don't know how many calves I kin spare, but you kin have what there is at the goin' price. Don't know who has got a likely young yearlin' bull to sell, do you? I've got to git one. Sold mine to you last fall for two an' one half cents a pound, you remember. I've been sorry ever since, as I had fodder 'nuff to keep him; 'sides that, he was a mighty good one, as I have found out from noticin' his calves. Guess if I'd kept him in the stable all the time last summer 'stead of lettin' him run with the cows I wouldn't had so many farrer cows this spring. But you can't allers tell, you know. I've got to git a bull somewhere's; ther' ain't one in the neighborhood. Every one of us sold 'em, you know, and none of us hardly know where to look for bulls now."

"Why don't you send to some responsible breeder and get a young thoroughbred. You could let him for service enough to pay for him, and have his service and him, too, for your trouble. In a year or two you would, by breeding him to your best cows, have some promising heifers coming on to fill up your dairy. Then if he proved to be a good bull you could keep him until he was five or six years old. That's the plan I have been following, and I find it pays."

"Oh, I don't want no thererbred bull 'round me. I'd rather have a common one, use him one year, then turn him off for beef. If I had one none of my neighbors would use him. If I charged a dollar a cow they'd go somewhere's else or git a bull of their own. I've seen that skeem tried and know 'bout it. Then this talk 'bout raisin' the calves from the best cows is all in your eye. Some of 'em is best this year, some of 'em next year, no two years 'like. Can't tell much 'bout what a cow will do next year, so one might 'bout as well chance one cow as another, as far as that goes. If I kin raise or buy a cow that will give a good mess and hold out purty well through the drought, she's my cow, I don't keer uv what

breed or how many of 'em she is. But I'll tell you one thing, I don't want none of them special-purpose cows 'round me. I want one that I kin turn off in a few days for beef when she goes dry. Just now beef is purty high in price 'cause it's scarce. Farmers sold everything young two years ago when fodder was scarce, and I'm goin' to be ahead of them farrer cows of mine. Just cum in and look at 'em. Why, they'll weigh purty nigh onto a thousand pounds each now 'thout any fatten' scarcely. What would they be worth be they was Jerseys 'bout as big as goats, with nothin' to refer the buyer to but a number seventeen hundred thousand; 'Mary Ann of St. Paul; 'or 'Countis of Toledo; 'or 'Oshkosh,' number nine millions; butter eighty-five pounds and seventeen ounces a week? Nothin'! Uv course, you kin make thererbreds pay 'cause you're in the bizzness and sell to men every day or two that wants sich stock; and, bein' in the ring, can git big prices; but no common farmers couldn't never do it. Yes, we tried it; sides it all, if we did, and had any calves more'n we wanted, you wouldn't give nothin' for 'em—you'd say they wasn't good for much, 'cause they wasn't beefy 'nuff. Chances would be we'd have to 'deacon' every spare one we had. No; if sich cows had been most profitibal we'd all had 'em before this time, 'cause we know a good thing when we see it. There's a few of you fellers that is makin' it pay to keep thererbred cows and bulls; but s'poze all of us did it? S'poze all of our cows give six thousand pounds of milk each in a year testin' six per cent fat, and all of us kep' a high-falutin' bull of some big butter or cheese breed; where'd the dairy bizzness go to? There'd be so much butter that it wouldn't fetch more'n ten cents a pound, and cheese would be lyin' 'round loose everywhere and beggin' for customers at any price. No, sir, I don't want any of 'em; my cows give, they say, 'bout three thousand pounds of milk each, and that's 'bout the average 'round here; and yit cheese is only bringin' seven cents. S'poze all of our cows give six thousand pounds each; then what? Why, any fool can see that cheese wouldn't be worth more'n three and one half cents a pound. What better off would we be then? Can you tell? I've asked that question in two or three of the farmers' institutes held 'round here, but none of them travelin' sharks as does the blowin' for big pay could ans'er it. They know that we're makin' so much butter and cheese now with our what they call scrub cows that 'tain't worth nothin'; and they know if every one of us kept these six-thousand-pounds-of-milk cows that 'twouldn't pay us to milk 'em, cheese and butter'd be so low. But they keep right along, and so does some of the agricultural papers, talkin' this nonsense, thinkin' they're goin' to fool us farmers into buyin' or raisin' sich kinds of cows. But neither of 'em has got any influence; if they had they'd fool more of us than they do. But I don't believe the stories they tell 'bout these cows that give so much milk and make so much butter. Uv course, there may be 'casionally one of 'em, but it costs more to feed and fuss with her than it all comes to; they're sorter hothouse critters, and have to be blanketed, and sot up with nights, and fed and watered jist so much and so much. They're like some girls and wimmen—sorter nice to look at, and that's all. They cost more'n they're worth. No, I don't want 'em. My cows suits me well 'nuff. Say, if you cum 'cross a good bull, sich a one as you know I want, let me know. I've got to git one somewhere's, sure."

Some readers may think that the foregoing is overdrawn, but it is not. I have listened to the same talk, almost word for word, at different times, and have heard the same arguments offered in institutes.

These keepers of scrub bulls and cows never stop to consider the fact that they could, by keeping good cows and sires, so produce as much milk from ten cows as they do now from twenty, thus saving the cost of keeping ten cows and the room needed and care required for the extra ten. It never occurs to them that the overstocked market for butter and cheese is made so by the keeping of unprofitable cows—those which do not earn enough to pay for the food they eat, to say nothing of the care needed. Then, too, nearly all the poor butter which finds its way into our markets is the product of these cows. Those farmers who keep cows giving six thousand pounds or more of milk testing from four per cent to six per cent fat do not make ten-cent grease butter. They have a market for all the fine butter they can produce, at top prices at all seasons. It is the product of the scrub progeny, of a scrub bull, of a scrub owner,

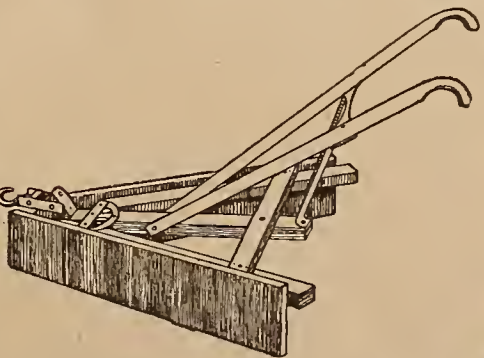
made into butter by a scrub's wife or hired girl, that sells as grease at from six to ten cents a pound.

I have two neighbors; one owns three acres of land and keeps one cow, the other owns thirty acres and keeps six cows. The former has a high-grade Jersey cow (seven eighths) that was milked every day during the year ending May 1, 1898. During that time she produced five hundred and forty pounds of butter, furnished milk for a family of three all the time, with sometimes four, and one hundred and eighty quarts, to sell at four cents a quart, besides. She also dropped a grade calf that sold when three days old for \$5. The butter sold for nineteen and one half cents a pound, average. So that the cow, saying nothing about the milk used in the family, earned \$117.50. The milk was creamed in the small, old-fashioned shallow pans, without ice, and was churned in a dash-churn. No pains were taken to properly ripen the cream by holding it at a low temperature until enough cream was had for a churning, then properly tempering it, and by using a starter, properly ripening it before churning. Had a hand-separator, revolving churn, starter, ice and other necessary appliances been used the output of butter from that cow would have been more than six hundred pounds. The butter made was very fine, and there were demands enough for it to have kept half a dozen cows busy. Another point: The cow had only a two-acre pasture, and when dry weather came, a quart each of bran and corn-meal twice a day, together with a bundle of green sweet-corn stalks, and was kept in the stable nights, with a feed of clover hay. These rations were not only out of balance, but were wholly inadequate for such a cow, she weighing very nearly one thousand pounds. Properly balanced rations amply fed would have raised that butter yield another fifty pounds. But what about the thirty-acre man! He kept six scrubs and six ewes and their lambs in a six-acre pasture all summer, except when they knocked the fences down and got into his neighbors' grain, which they often did. He sold all the milk, except a very little used in his family of two, at four cents a quart. The six cows earned less than \$150, and it required nearly the entire hay product from his farm to keep them and his two horses and ten sheep through the winter. When spring came, and the cows were ready to go out to their pasture, they were lousy and so poor and thin that a chapter of the Koran could have been read through either of them. " 'Twas ever thus."

C. W. JENNINGS.

## A SNOW-PLOW

Since adopting the Planet, Jr., my old wood-frame cultivator has had an easy time indeed, although exposed to all kinds of weather year in and year out. A happy thought struck me the other day. Why not make the abandoned frame—still in good condition—serve another purpose, perhaps for many years to come? I went to work, disrobed it of all unnecessary castings,

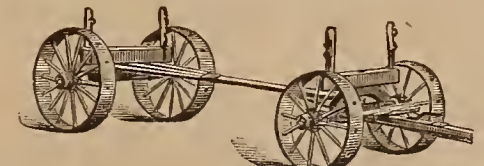


and with the help of two pieces of board fifteen inches wide and four and one half feet long I very soon had an excellent implement in running order for making paths through the snow from house to barn, hen-house and other buildings, to clothes-line, etc.

F. GREINER.

## FARM WAGON FOR ONLY \$19.95

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, sold at the low price of \$19.95. The wagon is only 25 inches high, fitted with 24 and 30 inch wheels with 4 inch tire.



This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels, and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices, made any size and width of tire to fit any axle.

# ENAMELINE

## THE MODERN Stove Polish

### PASTE, CAKE OR LIQUID.

The only up to date Stove Polish in the market.

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the value of a good separator, it is then only a question of which one you should buy.

### The Kneeland Omega Cream Separator

costs less than any other, is simple, durable, perfect in results, guaranteed right, or money back. What more do you want? It's a money maker for every farmer. Agents wanted. Everybody, send for our free book on "Good Butter, and How to Make It." Address, The Kneeland Crystal Creamery Co., 31 Concord St., Lansing, Mich.

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## A POCKET FULL OF.. MONEY

that is what the agents are making who are selling the

### Automatic Grip Neck Yoke.

It insures positively against accident should the traces become detached from any cause. May be the means of saving your life or that of your family. Plain unnickled, \$1; Nickled Loops and Acorn Heads, \$1.50; Nickled Tips and Centers, 1.75; Nickled Centers and Tips without Yoke, \$1.25; Centers without Yoke, 65c. Made in 3 sizes, to fit pole tips 1 1/2 to 1 3/4. Also farm wagon size to grip pole 2 1/2 to 3 1/4 in size. Extensively advertised. **THEY SELL AT SIGHT.** Send to-day for illustrated circulars and special confidential terms to agents.

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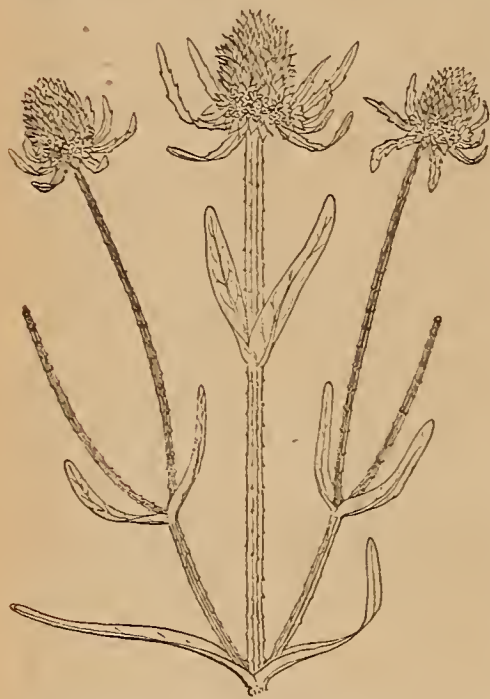
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## OUR FARM

### THE TEAZEL INDUSTRY

**T**HE teazel is becoming an important crop in some sections of the country. It is gradually supplying the home market and reducing importations from Europe, where it is cultivated extensively. The demand though limited is practically constant, the cloth-weavers being unable to find any mechanical device that will take its place in raising the nap on cloth.

Teazel is a biennial, grows about five feet tall, and produces a large number of flower-heads which begin to blossom at the top. These heads are cut as soon as the flowers upon the lowest row open, because the prickly bracts upon which the industrial value of the plant depends become soft and useless if left upon the plant beyond that time. The heads are divided into three classes—the king, or center, head, of which the plant produces only one, the medium, and the buttons. The king head blossoms and is gathered first, and the buttons last. Five or six inches of the stem is cut with the head. Before the heads are put in place upon the machine the stems are removed. The heads are then split in halves or quarters and fastened to cylindrical frames that are made to revolve against the cloth which passes beneath them.



Cultivation is comparatively simple. The ground, preferably a rich clay loam, is prepared early in the season and marked in rows three feet apart. The seed, which is small, is used at the rate of about a peck to the acre, and is covered very lightly. When a few inches tall the plants are thinned to about six inches apart and such crops as beans and beets are planted in the rows and between them. These are expected to yield enough to pay the cost of cultivation for both crops during the first year. In some sections exposed to rigorous winters corn is planted in alternate rows and the stalks allowed to stand during the winter so as to help catch leaves and snow, which act as a protection against the excessive cold.

In the second season only one cultivation, a thorough one, is given, after which the plants take care of themselves. After cutting, which commences in July, the heads are spread a few inches deep upon poles to dry, the seed collected and fed to poultry or saved for planting.

The heads, which are usually not sorted, are sold in bulk at prices ranging from 40 cents to \$1.50 a thousand. An acre will produce about 100,000 heads, though with clean cultivation and due attention to the conservation of moisture in the soil as many as 250,000 heads can be raised. When the market is not glutted the teazel crop is a paying one, and as there are comparatively few growers there is not often an oversupply. This should be a leading crop in localities where there are cloth-mills, and it is somewhat surprising that the heads are generally brought to the mills from a distance.

M. G. KAINS.

"I find," says ex-editor W. A. Greene, of Onawa, Iowa, "that everybody admires the usefulness and cheapness of the premium books supplied with FARM AND FIRESIDE and WOMAN'S HOME COMPANION. I do not like the agency business very well, but when I have a thing that all say is good and cheap, which is the case with Peerless Atlas, I can work it with satisfaction. I hand you another order and wish you would explain to me your plan of shipping 20 to 100 Atlases in advance, and collecting through the bank; would like to take advantage of this plan."

## THE POULTRY-YARD

Conducted by P. H. Jacobs, Hammonton, N. J.

### ROUP AND TUBERCULOSIS

Roup is frequently the cause when there is merely a discharge from the nostrils and mouth, or simply a thickening of the secretions, but such symptoms do not fully designate the different forms of the tubercular disease. In all feathered creatures the disease germs of tubercle very frequently first attack the membranes lining the mouth. This is in consequence of the germs being in the birds' drinking-water or picked up with food that has been contaminated by the excrement of creatures affected with tubercle. The disease germs set up inflammation of the mucous membrane of the mouth, and the inflammation soon spreads to the membrane lining of the nostrils, causing a running discharge, which is mostly supposed to be the result of a cold. The discharge soon begins to thicken, the thickness being, no doubt, mainly due to the presence of the bacilli of tubercle. Ulcers begin to be formed, sloughing of the tissues follows, and the waste products, which are thrown off, increase the thickness of the discharge, which now very quickly becomes decomposed and gives off a very offensive odor.

### EXERCISE AND FOOD

The active breeds are less liable to become overfat, because by exercise the food is converted into heat and motion, while the carbon of the food eaten by more indolent breeds is stored in the body as fat. Hence, to feed the Leghorns properly they must be given an opportunity to work. They will bear confinement, but not when the food is kept before them. Just as soon as they have no work they begin to learn vices, and especially feather-pulling. The food should be the same as for all laying hens, but it should be given in a manner to compel them to scratch. If a Leghorn begins to incubate, an examination will show her to be fat, which indicates either too much grain or lack of exercise. In summer they need only a feed of meat at night, as they are energetic foragers and invariably come up with full crops. In winter they should have a pound of meat, for twenty hens, three times a week, and a good feed of clover, chopped fine and scalded, in the morning, meat to be given at night. A pound of a mixture of equal parts of ground corn, oats and bran, for twenty hens, may be added to the clover.

### CHICKS AND WARMTH

Chicks in brooders are sometimes found dead in the morning, but as a rule the cause is due to crowding under the brooder, and it is usually the best that are found dead. Those on the outside, if the nights are cool, will endeavor to move to the heat. In so doing they trample those that are down. Soon all move to the center, and it is there that the pressure from all sides causes suffocation. The remedy is to give a little too much rather than too little heat, which causes the chicks to spread out. Leghorns feather rapidly, and are in need of more warmth than Brahma chicks. The food should be varied, containing bone and meat, and a teaspoonful of sulphur, to eighty chicks, in the food, given twice a week during dry weather, will help them when feathering. If the food or the parents were at fault they would die during the day as well as at night, but when found dead in the morning it is from crowding and trampling from lack of warmth at night.

### UNPROFITABLE FOWLS

At this season the hens will begin to lay, and they should not be crowded, but have all the room possible in the poultry-house. Do not feed a lot of fat hens, but send them to market. The drones in the flock are the ones that cut down the profits, and it is not uncommon for farmers to have twice as many males as are necessary. If only one half of the hens are laying they will really be supporting the other half, and twice as much food will be consumed as should be the case. This adds to the cost of the eggs. It is well, if possible to do so, to separate the laying hen from the others, putting the non-layers in a particular diet; that is, to give no food but once in forty-eight hours, as it is almost certain that such hens will be very fat, due to heavy grain diet in the winter. Fasting will not harm fat hens, and if they are given any food it should consist of lean meat exclusively. So treated they will soon begin to lay.

### COLD DRAFTS

Some fowls inherit a susceptibility to roup, and the slightest exposure brings on some form of the disease, which, becoming deeply seated, is carried to the entire flock through the agency of the water-fountain or the food-trough. Some birds seem to be entirely exempt from it under all conditions. The most common source of roup is the poultry-house. The ventilator may permit a cold draft of air to flow down and over the birds when they are on the roosts, or a crack in the wall may allow a small stream of air to play right on the head of a hen. She emerges from her quarters in the morning with one eye closed, while a familiar sound of "pip," which is simply a sneeze or effort to clear the nostrils, indicates that she has a cold in the head. This may come from the overhead draft of the ventilator, and a few of the fowls may have stiffness of the neck also, but sooner or later roup will result if the cause of the draft is not removed.

### FROZEN STOCK IN MARKET

There is some complaint that the large amount of frozen stock reduces prices. If the other side is considered it will show that by free freezing the chicks in the fall, when prices are low, better sales are made through the winter; hence, what may be a loss to some is a gain to others. Taken on the whole, the refrigerators have increased the markets for poultry by creating a large demand for late chicks. Frozen poultry cannot compete with that which is choice and fresh, however. It comes on the market and sells because there is nothing to compete with it, and the supply is usually exhausted by the time spring broilers are ready.

### INDIVIDUALS IN FLOCKS

When some member of the flock seems to have an ailment, and no others are affected, it may be safely ascribed to some cause peculiar to the individual. For instance, when one of the fowls twists its neck around and seems to shake its head, cannot eat, or is helpless, it is difficult to arrive at a correct knowledge of the cause; but it may be rheumatism (from dampness), pressure of blood on the brain (from high feeding), or an injury. The only remedy is to keep the fowl quiet, on straw, and feed only once a day on lean meat. If it does not soon recover it will be of no value except for the manure heap.

### ROASTERS

At this season there is a demand for roasters (not roosters), and good ones sell from fifteen to twenty cents a pound. They are simply large chicks that weigh five pounds to the pair. Roosters, however, sell at about five cents a pound only, and are not wanted in the market, as they reduce the prices. Chicks that are to be sold for roasting should be fed heavily three times a day for two weeks, so as to have them fat and bring the prices offered for "choice and good."

### CORRESPONDENCE

**WILD TURKEYS.**—I noticed in FARM AND FIRESIDE where a subscriber asked something concerning the wild turkey. Now, I have had considerable experience with the wild turkey in his wild state, having killed many of them in almost every style of hunting then known to sportsmen. I have often seen the eggs taken and hatched on the farm, and it is a foregone conclusion that the turkey will quit you when he is grown, unless you crop his wings, for Nature has made of him a wild bird, and no matter how you raise him, when he gets his growth he will become wild. I have seen him raised with the tame turkeys, and while they roosted on the same branches of the surrounding forest-trees the wild turkey would fly to the extreme top. The wild turkey is the only genuine Bronze turkey. I have often killed a gobbler that would weigh thirty pounds, and with his beautiful bronze plumage he is a fine-looking bird. The wild turkey's eyes never fool him. If he sees a man he never looks but once, for that is sufficient, as he sees all that he cares to see, and then he is gone. J. E. K. Kelleyville, Indiana Ter.

### INQUIRIES ANSWERED

**Leghorns.**—L. E., Pleasant Mills, N. J., writes: "Is there a rose-comb variety of the Buff Leghorns?"  
REPLY:—There are rose-comb varieties of the Whites and Browns only.

**Crossing Plymouth Rocks.**—R. S. C., Akron, Ohio, writes: "I desire to get new blood in my flock, and desire to know which breed should be used for crossing with a flock of Barred Plymouth Rock hens."

REPLY:—The proper plan is not to use any but Plymouth Rocks. Next spring get males of the White variety; the following spring use Buff Plymouth Rock males, and the third year go back to the Barred variety.

**Langshans and Black Cochins.**—M. G., Easton, Md., writes: "How can I distinguish Langshans from Black Cochins, both breeds (to me) being alike in color and size?"

REPLY:—The Langshan has long sickle-feathers, pluck between the toes, is not so heavily feathered on the shanks, is active and can fly, and the plumage has a greenish tinge. The Cochins cannot fly, is not active, and is apparently heavier and more compact.

**Heads Swelling.**—R. J. G., Duck Creek, Wis., writes: "The heads of some of my fowls are swollen, and they are entirely blind, a very offensive odor being present."

REPLY:—It is roup, aggravated by exposure to cold drafts. Camphorated oil may be used as a relief, but it is doubtful if they can be saved, except with more labor of handling than one is willing to bestow; hence, the cheaper plan would be to destroy them. They are also perhaps in a very fat condition.

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# VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

**The Treatment of Spavin and Ringbone.**—Spavin and ringbone are specific, and as far as the morbid process is concerned, identical diseases of the articular cartilages, bones and ligaments of the hock-joint and the phalangeal joints respectively, and only differ in so far as they have different seats. Navicular disease, too, presents the same morbid process, but owing to the peculiarity of its seat, the navicular joint, it very rarely yields to treatment, as will be explained further on. The causes of these diseases, like those of many others, can be divided into predisposing and exciting causes, and it seems that both have to be present and to act in order to produce the disease. While the former are well enough known to be consisting in a disproportionate distribution of weight and concussion upon the several parts of the joint, either in consequence of abnormal weakness, defective mechanical proportions or some acquired deficiency produced, for instance, by unsuitable shoeing, or by some other cause likewise effecting an overburdening of certain parts, the exciting cause, probably of a specific nature and undoubtedly present and acting in every case of spavin, ringbone and navicular disease, is not yet known, except by its peculiar (specific) effect upon the attacked cartilages, bones and ligaments. Like in many other diseases, it can be observed that neither the predisposing nor the exciting causes alone are able to produce the morbid process, but also that the more developed the former—that is, the weaker or the more defective the formation of the joint, and consequently the more disproportionate the distribution of weight and concussion upon its parts—the less vigorous needs to be the attack of the latter, and vice versa. At any rate, I have never yet seen a case of spavin or ringbone making its appearance in a strong and in every respect well-proportioned joint. Therefore I consider it to be perfectly safe to say where the predisposing causes do not exist the exciting causes are powerless, while on the other hand it is seldom that a horse with very defective hock-joints, if living to mature age and required to do considerable work, remains free from spavin, or that one with weak and badly proportioned phalangeal, but especially coronet, joints remains free from ringbone. The hock-joint is rather complicated, is composed of really four distinct joints, and in a horse made up of six or seven short bones and numerous ligaments, or if the lower end of the tibia and the upper ends of the metatarsal bones are counted in, of ten or eleven. These bones, as already mentioned, are connected in such a way as to form four joints, and therefore present eight cartilage-coated articular surfaces. The upper one of these joints constitutes a perfect hinge-joint, in which nearly all the bending and stretching (the flexion and extension) of the hock is taking place. The three single joints below, but particularly the two lowest ones, have nearly flat articular surfaces, are only semi-movable, and therefore come hardly into action in the bending and stretching movements of the hock, and as joints can be spared without any perceptible effect upon the movement or gait of the animal. Their office, it seems, is to increase the elasticity of and to break the concussion. The three phalangeal joints, the pastern-joint between the lower end of the metatarsus, or metacarpus, and the first phalanx or pastern bone, the coronet-joint between the first and second phalanges or pastern and coronet bone, and the hoof-joint between the second and third phalanges or coronet and hoof-bone, too, are essentially hinge-joints, but nearly all the bending and stretching takes place in the upper and lower one, the pastern and the hoof joint, and but very little in the coronet-joint, which, to a certain extent, presents a semi-movable character and may be made immovable without much influence upon the gait or movement of the animal, notwithstanding that an intact coronet-joint considerably breaks the concussion and increases the elasticity. If these facts are kept in mind the following will be easily understood. In lameness producing spavin and ringbone the morbid process invariably first attacks the smooth and cartilage-coated articular surface of one or more bones, and soon produces degeneration and destruction, first in the cartilaginous coating and then, after some time, in the substance of the bone beneath. It thus causes the formerly smooth and frictionless surface to become inelastic and rough. Although the movement in a semi-movable joint is but very slight, it is yet sufficient to cause painful friction between the diseased and roughened and probably also more sensitive articular surfaces, and this, together with

the weight and concussion, necessarily also producing pain, seems to constitute the immediate cause of the lameness. If any shifting and any friction between the diseased articular surfaces is prevented by making any movement, and consequently any friction, impossible, no more pain will be felt, and the lameness will cease. Hence, the treatment (removing of the lameness) of spavin and ringbone consists in producing immobility or stiffness (technically called ankylosis, Duglison) in the diseased joint or joints by causing the affected bones to grow together so as to obliterate the diseased joint. This, of course, cannot be done in the upper (hinge) joint of the hock, nor in the upper (pastern) joint and the lower (hoof) joint of the phalangeal joints, because immobility in any of them would make the horse a worthless cripple; and besides this, it would be rather difficult to produce ankylosis in as movable a joint as any of these. The lameness caused by spavin or ringbone therefore cannot be removed if in the former the morbid process extends to one or both of the upper joints of the hock, and if in the latter the morbid process has also attacked either the pastern-joint or the hoof-joint. For the same reason the prospect of removing the lameness caused by navicular disease in which the morbid process has its seat in a joint that cannot be spared is and necessarily must be very poor. A treatment of spavin and ringbone consequently can be undertaken with a fair prospect of success if the morbid process is restricted to the semi-movable joints—in spavin to the two lower ones of the hock, and in ringbone to the coronet-joint. Although it should not be necessary, I will explicitly say that any treatment of spavin and ringbone can have no other object than to remove the lameness, because a restoration of the diseased tissues to a normal condition is an impossibility and morbid osseous enlargements can be removed only by means much more injurious and damaging to the animal than the enlargements themselves. If ankylosis is to be produced, two things are necessary; namely, a moderate degree of inflammation in the diseased parts, not severe enough to cause any destruction, but just sufficient to throw out all the exudates required to effect first an agglutination of the diseased surfaces and finally a firm union between the diseased bones; then, also, strict rest until such a firm union has been produced, which will be indicated by the horse not any more favoring the formerly lame leg, but using it for support just as much as the other one. If such a continued rest cannot be given, or if the patient is a very nervous and restless animal, or if the same is constantly harassed by flies or in any other way, all attempts to produce ankylosis, and thus to remove the lameness, are apt to be in vain, because bones continually moved cannot unite. Consequently it is not advisable to undertake the treatment of spavin or ringbone unless strict rest to the diseased parts can be secured. For this reason and no other I never undertake the treatment of these diseases during the fly-season, unless it be that arrangements can be made by which all flies can be kept away. Further, it cannot be expected that such a union (ankylosis) of the diseased bones, formed perhaps under favorable circumstances, be permanent unless the united surfaces are large enough and the bones furnishing the same are sufficiently strong to support the weight of the animal and to sustain the concussion. Consequently, where the diseased joint, be it one or both of the semi-movable joints of the hock or be it the coronet-joint, is absolutely too weak or too poorly formed the desired ankylosis either will not be produced, or if produced, will not be permanent, and then the lameness, perhaps worse than ever, will reappear. It is somewhat different if the joint is sufficiently strong and well-formed and a separation is caused by some violent action. In such a case a severe lameness will likewise result, but as a rule a new union will soon be effected if the animal has strict rest, and the lameness will disappear. As said above, strict rest for a sufficient length of time (on an average, for two months) and a moderate degree of inflammation are necessary. The first is provided by keeping the animal to be treated for at least two months tied in a single stall with a level floor, and there to supply the same with food and water at each meal-time. To avoid any misunderstanding I will explicitly say that the patient must not be taken out of the stall for any purpose whatever during the treatment. The moderate degree of inflammation can be produced in different ways. For instance, by repeated external applications of a sharp salve or ointment, or by judicious firing with a red-hot iron; which method should be given preference will depend upon circumstances. If the first-named one is chosen, an ointment composed of biiodide of mercury, one part, and hogs' lard, twelve parts, thoroughly mixed and triturated in a porcelain mortar, and rubbed in on the diseased part of the joint about once every three to five days, will probably answer better than anything else. It has the advantage of not leaving any hemishes in the shape of scars. The first application must be a thorough one, but like all subsequent ones, the rubbing-in, which should be done with the hand, must be limited to the seat of the disease. It is not necessary to use a large quantity at any application; on

the contrary, to use too much may do damage, but what is used must be thoroughly rubbed in. About as-much as the size of half a hazelnut will be enough for each one application except the first, when about double the quantity may be used. The second application can be made three days after the first. Three days later scars will have formed. The same are easily removed by greasing them over with a little clean lard, for this will sufficiently loosen them within about twenty-four hours to be scratched off with the finger-nails. This done, the third application can be made, and so on. Whenever scars have been formed the same must be removed in the way stated before a new application is made. This treatment, as a rule, must be continued about eight weeks. After all traces of soreness from the last application have disappeared, and after the horse has ceased for at least a week or more to favor the affected leg, and has been standing squarely on his four feet, the same may be subjected to a test which, however, on the first day must not be more than a gentle exercise in a walk over a short distance, say about one hundred feet. The second day the exercise may be extended a little further, but only in a walk. On the third day a slow trot over a short distance is admissible. On the fourth day the same, only a little further, and so on. If the horse does not show any lameness in these tests, the same in about a week or ten days may be employed for light work at a slow gait, which in about a month may be gradually increased, but gradually only, to ordinary work. As to the other method, firing with a red-hot iron, it has the advantage of requiring but one application, and the disadvantage of being apt to produce more or less conspicuous and lasting scars and of requiring very good judgment, a steady hand and some dexterity. Still, if it is done with a steady hand, and if good judgment is used, the scars which are left behind as a rule will be insignificant and hardly be seen. As to the iron to be used, I prefer a heavy pear-shaped iron, ending in a point of about thirty degrees, fastened (welded) with its blunt end to an iron handle not less than twenty-four inches long (long enough to enable me to keep at a safe distance close to the fore leg of the animal), a little over half an inch wide and about a quarter of an inch thick, so as to enable me to bend it in any way I may desire, and to put the pear-shaped and heated part of the iron into any angle to the handle I may prefer. At the free end of the iron rod I have a wooden handle. I prefer a heavy firing-iron for two reasons; first, a heavy iron can be held more steady than a light one, and secondly, if the iron is heavy enough and once well heated it will retain the heat until the whole operation is finished, and therefore requires but one heating and thus makes it possible to finish the operation in a very short time, or before the animal becomes nervous and excited and finds out what is going on. With such a heavy iron heated at red heat I burn five or six points about three fourths of an inch apart and sufficiently deep to just perforate the skin and to throw out exudates. Each point is touched two or three, or if the iron is not quite hot enough, perhaps four times. Care must be taken not to fire the large vein (vena saphena) passing upward on the median fore part of the hock-joint. For the operation I keep the horse standing, put a good twist on his nose to distract his attention, instruct the man who holds the bridle to hold the horse's head high and to cover with his hand the eye of the horse on that side on which I do the firing. If these little precautions are taken the whole operation can be finished in about a minute and without any defensive movement of the animal. That the points must be made at the right place, covering the diseased part of the joint, that the same must neither be too deep nor too shallow, and that the operator must have a steady hand and a watchful eye, and must exercise good judgment, will not need any explanation. Concerning the prognosis or the prospect of success in effecting a cure of the lameness, provided no mistake is made in the treatment, I may yet say that the same is the more favorable the stronger and the better the make-up (the mechanical proportions) of the affected joint, the more hard work the horse has performed before spavin or ringbone made its appearance, and the more quiet and docile the disposition of the animal. On the other hand, the prognosis is the more unfavorable the weaker and the more defective the formation of the diseased joint, the less work the animal has done before the same contracted spavin or ringbone, and the more restless, nervous and irritable the disposition. The prognosis, as a rule, is also very unfavorable if the animal has been treated before without success for the same ailment, particularly if the treatment has been a severe one. Spavin and ringbone have been looked upon from time immemorial as hereditary diseases, and they must be considered as hereditary in so far as the predisposing causes are transmitted by the parents upon their offspring. They are hereditary in about the same sense as tuberculosis. Another article on spavin and ringbone will not be published in less than a year, therefore, any one interested is advised to preserve this number.

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## THE LOST WILL

By Will Allen Dromgoole

### CHAPTER V.

#### THE GHOST OF THE OLD SPRING

ONE morning Mrs. Womack from her kitchen door was greeted with a loud hallooing and a mighty opening and shutting of gates in the lane leading down to the croppers' cabins across the field. Glancing up she saw two wagons, one heaped with household furnishings, the other, which was smaller and drawn by a single mule, containing several children and a few rolls of hedging. As the mistress of the house rightly conjectured, the new cropper was moving in.

"Such a lot o' niggers," was her comment, as she turned back to the stove. She found no other fault, for she knew that not one of those dusky little fingers but would tell among the cotton-holls by and by, when the picking season should come around.

An hour later she picked her way across the winter field to make such arrangement as was necessary with the mother of the family regarding the washing—an arrangement that had always been made with the wife of the cropper on the plantation.

Four little round, white-eyed bundles met her at the cabin door and stood staring at the new mistress as though she might have held the lines of their destiny. A girl of fifteen and a boy of twelve were setting up a bedstead, and a strong, healthy-looking man was propping a cook-stove with a missing leg into place by means of a flat rock.

The wife of the man had not arrived, she having remained behind to finish the packing and attend to the removal of the balance of their modest belongings.

The owners of the white eyes were neither rude nor familiar, yet when Mrs. Womack had left her instructions for the mother, and was about to retrace her steps through the bare, brown cotton-field, the largest of the little black huddles edged itself forward, and pointing to the drooping roof of the old spring-house, said:

"Ain't it ha'nted?"

She looked at him blankly, and said nothing until the question was repeated:

"Ain't it ha'nted. Folks say it am ha'nted."

Then she understood that he was talking about the old spring, and for a half moment was tempted to be angry. Some officious neighbor, was her thought, who coveted the cropper for his own cotton-fields, had doubtless been playing upon the negroes' superstition. After a moment's consideration, however, Mrs. Womack concluded it was just as well the little darkies should be afraid of the big spring that stood so near the plantation-house.

"Yes," said she, after a moment's hesitation, "they say it is haunted." Then turning to the big girl at work in the house, she added, pointing meanwhile to the spring-house:

"You'd best keep them away from there; it is said to be dangerous."

"Lord, yessum," said the girl. "We-alls done heard 'bout dat spring. We-alls wouldn't go 'bout dat spring after dark not for nothin'. Dey say dar's a ha'nt dar goes up en down de ladder nights wid its own hald under its arm. Mammy done tol' us. And pappy done say he'd take de skin off'n us ef we go 'bout dat place. He ain't feard de ha'nts, though, pappy ain't. He say all he skeered ob am de old house cavin' in en killin' somebody. Dat's what pappy say."

The man had driven off again, but a glance at the strong, honest old face, as she saw it lifted above the iron stove a moment before, had convinced Mrs. Womack that she could play no tricks with old Uncle Ben's superstition. Persistence, caution, unyielding will, honesty, were all there, but not a trace of fear. She told herself she was half afraid of him at the very outset. She had spoken to him as he passed out of the house to his wagon:

"Have your family had any breakfast, Ben?"

Something like pleasure lighted for a moment the swarthy face of the new cropper.

"No'm," said he. "We all wanted to git a fair start and didn't make no fire in de stove dis morn'ing. I'd take it mighty kin', ma'm, if yon'd give de little chillen a bite; dey ain't had nothin' but some col' bread. De rest ob us kin wait."

Something told the mistress of the plantation that this was her opportunity of making a friend of the new cropper; something told her it was just as well to have him for a friend. But Malviny Womack was not a woman to be swayed by impulses. She considered herself a "fine business woman." Her own hard lot before marriage had taught her economy, she often declared.

"Now, Ben," she said, "we'd best begin as we're going to hold out. You musn't begin by expecting me to feed the family from my kitchen; that wasn't in the contract."

He stared at her in surprise for a moment, then howed, gathered up the lines, called to his team and was gone.

He knew, however, what he had to expect from Mrs. Womack; he had grasped the whole key to her character in that one short, crisp interview.

Mrs. Womack told her story when she reached the house, but before the sick man could make any comment she was off on another subject.

"Now, pap," she was saying, "if yon will sit up a minnte I'll shake up your bed. Fetch a pillow, Wesley, for the big chair. I reckon I must step over and see how Nora O'Bryan is this morning. Sakes alive! how she did take on. I was afraid she'd die on my hands before the doctor could get there. This mattress begins to look old already. And such sewing; looks like a child might a-done it. I'm a good mind to send it back to the store. Looks like it might be stuffed with sticks. I'm a good mind to rip it open and see what makes it look so stuffy and hard. Don't it worry you, pap?"



"DON'T YOU CRY; YO' PAPPY'S A HEAP BETTER OFF"

Mr. Womack, secretly shaking, said, "No, it was all right;" while Wesley stood breathless, fully resolved that if she did open the mattress to snatch the document concealed there and make a break for the door. But she tossed the mattress back, after another comment upon the stitching, then said:

"Now, pap, I'll help you back to bed; then I'll run up and see how Nora O'Bryan is. Wesley can sit with you till I come back, and I won't stop a minute. It's clouding up like it might rain."

Wesley had heard the account of the hungry little children in the cabin, and when his stepmother's head appeared at the top of the hill on the way down to the O'Bryan place he said to his father:

"There's nigh a potful of coffee and a whole pan of cold biscuit that I was to give to the chickens, and a dish of fried bacon. Might I take it to the little niggers in the cabin?"

"Yes, son; run and fetch it," said Mr. Womack. "And tell Ben to come up here when he's through his work; I want to see him. And tell him if he needs anything to come and get it. Tell him I told you to say so—to come right up and get it. I'm not going to let my hands suffer while there's life in my body, anyhow. Don't tarry, son."

It was a royal welcome that met him at the cabin. The round white eyes were watching from the window, so that when he stopped at the door and yelled, "Hello there, you; open the door, I've got my hands full," it was not necessary to repeat the call.

The door swung back and the white eyes fairly danced their delight, while the big girl, Martha, relieved the visitor of his burden.

How the lonely heart of the heir to those same brown acres over which he had just trod warmed with friendly delight at the picture of the four little darkies crowded about the plate of brown biscuit. What visions of good times to come; coons, rabbits, squirrels, brown nuts, wild grapes, and, perchance, even that most delightfully exciting of all things, a 'possum hunt in the woods beyond the cotton-fields. He knew what royal good comrades they would make; if only he could get away from his duties at the house.

"I've brought you something to eat," he said; "father told me to. And I am to hurry right back. Can you tree a coon?"

This last was to the largest boy, who grinned, nodded, and said:

"I jist kin."

The next boy edged himself forward, and said:

"My name's Sam; what's your'n?"

"Mine's Wesley. Where's Uncle Ben?" said Wesley, again reminding that he was not to tarry.

"He's coming soon," said the big girl. "But I'll give de chillen a bite now; dey're dat starved. And den I'll wash up your dish an' things. Jist set on dat cheer a minute till pappy comes."

By the time the children were gathered around the table and had begun to eat Wesley felt quite at home with them. Indeed, so good did the brown biscuit look, and so comical were the stories of coon and of 'possum the big boy was telling, that almost unconsciously Wesley drew his chair up among the group, and before he knew it was munching one of his own biscuits and enjoying the breakfast of his own providing as heartily as the little darkies themselves.

lick while I'm above ground. It won't be for long, but he is going to be free of heatings that long, anyhow. I tell you, it'll be the worse for you if you do. I ain't dead yet, and I mean what I say. He's to come and go to the cabin whenever he feels like it. You hear that, son? Go up there whenever you want to; father'll let you. This is father's place—yet."

His wife looked at him in a startled wonder. Had the old clock on the mantel suddenly stopped its monotonous ticking, and begun to rebel in words against telling the time, she would not have been more surprised. But there was that in the invalid's face which told that he was in earnest; and Mrs. Womack, glancing through the kitchen window at those broad old southern acres, was reminded that good temper and obedience were the most potent weapons of warfare in her case. So from that time Wesley visited the little negroes in the cabin, went with them to the river, fished, hunted and trapped whenever it suited his fancy to do so. The weeks passed quietly, even happily, with those little dusky companions to help the time along. Across the cotton-field the new, rich, upturned mold showed where Uncle Ben's plow had been at work breaking up the ground for the cotton-planting.

But with the going of the winter the shadow that hung upon the plantation-house drooped lower and nearer. The invalid weakened. The end drew perceptibly nearer. The listlessness that had marked the progress of the disease had left him; he was now nervous and restless and full of excited uneasiness.

One day another fear woke in his heart, if, indeed, it had ever slumbered. His wife overturning his bed renewed her threat of sending it back to the house from which it had been purchased. At the threat he flew into a great passion and told her to wait until he was dead before she made herself a laughing-stock to the town.

But the threat had frightened him anew, because he saw that his anger had awakened her suspicions at last.

That same afternoon he woke from a light doze to find her hand cautiously feeling underneath his pillow.

"Just smoothing the bed things," she told him; but when she handed him a glass of water his hand shook so that the tumbler fell to the floor and crashed into a hundred pieces.

She went into the kitchen soon after to mix his medicine, and when she handed him the tumbler containing the reddish-looking liquid Wesley's face appeared at the door behind her for an instant and the sick man saw the boy distinctly shake his head.

Almost at the same moment something crashed in the kitchen and the stepmother ran out to see what the "trifling hoy had broken now."

While she was gone the invalid tossed the contents of the tumbler into the slop-basin. Later Wesley whispered to him that he had seen her drop into the medicine something from the vial on the kitchen shelf, labeled "laudanum."

He understood then that she meant to drug him and search the mattress, and resolved that he would not close his eyes that night. And the next day he would surely change—

He was asleep before he had finished his planning. When Wesley looked into the room the next morning he was still asleep, with the sunlight falling upon the thin, emaciated face, showing all the sad long lines of suffering.

But at Uncle Ben's cabin on the hill the night had not passed so quietly. The storm that had rocked the little log cabin had merely whistled like a madman about the eaves and windows of the more substantial plantation-house, where the owners slept on, unconscious, to all seeming, that the lightning flashed, forked and angry, the wind lashed the old cedars in the yard, and cut like a lash at the tender new greens just beginning to shoot into life. One of the children in the cabin had been ill—suddenly and alarmingly ill. In spite of the storm Aunt Jane had resolved to go up to the house and ask for medicine. So, leaving Uncle Ben in charge, because the frightened little ones would not be left without him, and the fear of the haunted spring-house made even the larger children afraid to venture out, the mother set out across the long, muddy cotton-field, with the wind tearing at her clothes and the lightning blinding her eyes.

Still, she was not afraid; she never had thought much about the haunts of which the children stood in such horror, and she was familiar enough with the path through the field to be in no danger of missing her way.

More than once the wind lifted her almost off her feet, but she struggled on until the last gate was reached, leading into the farmyard at a point near the great spring.

Suddenly something flashed across the darkness; something white and tall and rigid-looking. It shone but a single instant, as it brushed past her toward the rotting old timbers of the spring-house, and was gone.

She stopped, breathless and startled, to watch a moment, and a light that was not the lightning twinkled in the old ruin, and was gone. Another moment, and it came again, flashed, wavered and burned steadily on, and through the shaking, rotting old timbers Aunt Jane saw something ghastly and terrible, with starting eyes and bloodless lips, half standing, and bony hands grasping a candle, tottering up the crazy old ladder lead-

ing to the loft. With an unearthly shriek she turned and fled back to the cabin just as a terrific peal of thunder rolled across the heaven to drown her cry of terror.

She flung herself into the cabin, crying, "De ghost! De spring-house ha'nt! I seen it! Oh, Lord! Oh, Lord! somebody gwine die! I done seen de ha'nt!"

Uncle Ben was sitting by the bed of the sick child when his wife entered with her strange, wild story; he rose up at once.

"Yon stay here, honey," said he, "en tek keer de chillen."

The next moment he was running down the path, straight across the cotton-field in the direction of the haunted spring. Reaching it, he ran around by the snaken roof, and stooping, put his eyes to a crevice in the shingles. The next moment he drew back with a smothered exclamation of "Oh, my God!" He, too, had seen the spring-house haunt. And he saw that it's eyes gleamed with a light unearthly, indeed, and that its mission, whatever it might be, to the tottering old ruin was a secret one; and he believed, as did his wife, that the vision meant that some one would die.

The storm raved and roared; the cedars lashed their purple tops and beat the ground about them in a mad fury; and at last the day dawned and the sun shone clear and pitiless upon the ravages the wild night had left in its track.

Wesley peeped into his father's room, and after a glance at the closed eyes tiptoed to the window to lower the shade, so that the light would not disturb his slumber. But at that moment the sufferer stirred and called the boy to him.

"Don't go," he whispered. "Lift—me—up—son."

In an instant he knew that his father was dying. Through the window, view unobstructed, gloomed the solemn old ruin that had been the spring-house; with his eyes fixed upon this the dying man lifted his skeleton finger and tried to point:

"In the—bluebirds—cradle—"

There was a sigh, a gasp, and his head fell against the arm of the startled boy, Jonathan Womack's fight with life was over.

Wesley laid the dead man back upon the pillows and ran screaming from the room; for the first time in his life he turned to his step-mother for help.

"Oh, come!" he shouted. "Come, quick; he is dead, in my arms, while I tried to lift him up!"

Mrs. Womack dropped the pan she was about to thrust into the stove and ran to the bedside; the sightless eyes looked straight into hers, but they saw nothing.

"Run!" she cried. "Run for help, quick!"

Wesley's first thought was Uncle Ben; he tore open the doors and went running across the storm-swept field to the cabin on the hill. The negroes were sitting down to their breakfast when he burst into the room.

"Uncle Ben," he shouted, the tears choking him almost, "come, quick; come to father; I think he is dead."

The family rose as one from the table.

"Dar now," cried Aunt Jane. "What I tol' you? Ahn't I done seen de ghost?"

Uncle Ben gently laid his hand old plow-hand on the boy's head, a word of sympathy in every stroke of the brown palm.

"Neb mine," said he, "don't you cry; yo' pappy's a heap better off'n what he wuz. En we-alls kin go to him himely, bress de Lord. Unc' Ben yo' frien'; Unc' Ben gwine stan' right square up to you, sho's you hawn. Aunt Jane gwine up dar en he'p yo' ma, an' Unc' Ben gwine step ober yonder and fetch Mr. Bryan's folks; en Jack dar's gwine saddle de horse en go up en see what word yo' ma want send to town. Dar now! you-alls done heard what you got to do; go en do it."

At last it was over; the solemn little service, the burial, and the few friends and neighbors had returned to the desolate farmhouse to hear the reading of the dead farmer's will.

Perhaps two hearts in the assembly didn't beat quite as evenly as they might; for it must be admitted that at that moment, Mr. O'Bryan and Nora were feeling a bit sorry for the widow, all unconscious of the surprise in store for her. Lawyer Brewer had come out, and when Mrs. Womack, produced the document from the bottom of her trunk he stood up before the company, adjusted his glasses, glanced at the paper, the date, and said:

"There is a later will than this—"

Mrs. Womack's heart stopped beating while she waited for those slow, clear words as they dropped from the lips of the attorney.

"I wrote the new will myself," said he, "on the night of January the eighteenth. Has any one that document?"

Nobody stirred, until Mrs. Womack said:

"There's no such document."

"There is," said the attorney, "for I wrote it." It was witnessed by Dr. O'Flynn and farmer O'Bryan."

Suddenly a light broke in upon Mrs. Womack; the face under the black widow's cap grew pallid as she recognized the trap that had been set for her and into which she had plunged headlong.

Scarcely knowing what she did, she stepped up to Mrs. O'Bryan and shook her fist in that lady's pretty face.

"So that is the 'fits' you were having," said she, "yon lying, tricky Irish hiddy! Mustard!

Meal! Pleurisy! And I, like a fool, sitting there feeling sorry for you! Oh, I'll pay you for that night's work, you'll see! You'll see!"

There was a light touch, hesitating, pleading, on her arm, and an old black face looked into hers. Gentle, kind, full of unspoken pity.

"Be still now, mistress," said old Ben, "en don't gib nobody a chance to laugh at you. We's all goin' he'p yon all we kin, enyhow."

It was the word in season that prevented her making a spectacle of herself, and she recognized it with a feeling of deep thankfulness. Ben's life hadn't been a path of flowers under Mrs. Womack's reign, but all that was put aside now, and there was nothing but pity in his heart, and a deep thankfulness when he saw the hard task-mistress sink, quiet and subdued, into a chair while the lawyer went on talking.

"The deceased while living informed me that he would leave the secret of the hiding-place of this last will to his son, Wesley; I would like to know if he did so."

As Wesley stood up to tell what he knew Mrs. Womack began to understand that it was all true—that she had been fooled after all; and the worst of that ugly feeling was that it was only just and right that it should be so. She had not so much as the commendation of her own conscience in her loss and her chagrin.

"Go on, my son," said the attorney; "tell us where your father secreted his last will."

"In the mattress, sir," said Wesley. "In the mattress under his head. I sewed it in there myself."

She understood then for the first time the meaning of that poor, unsightly stitching; she knew that she had been deceived, played upon both by her family and her neighbors. But she had one triumph yet.

She heard the ripping and cutting as they opened the old rent; she heard more than one chuckle of satisfaction; then she heard whispers, ejaculations of surprise, dismay. And then the attorney stood up straight and mopped his brow, and announced the last hitch in the affairs of the deceased.

"Ladies and friends," said he, "I have failed to find the document in the mattress, as advised."

The will was indeed gone.

(To be continued)

2

**VANISHING WILD THINGS**

Even the unwelcome evidence that forces itself upon us year by year, tending to prove a constant and rapid decrease in the number of our familiar and interesting American birds, should be studied without prejudice. We love the bird of orchard, field, flood and wood; but that is no good ground for neglecting any fact in considering the causes of their vanishing from the areas once teeming with them.

The birds disappear, and in our grievous disappointment when they do not come back we hastily look about for somebody to lay the blame upon, and so scold with due vigor. Then it is time for sportsmen to dodge and wince. The man with the gun must be ready to hear almost infinite abuse or he must betake himself beyond reach of it. He is guilty of sundry depredations, sins against the law of universal bird protection, that he cannot deny; but he may well object to vicarious receptivity when the day of punitive gift-offering comes and somebody proposes making him the recipient of every other transgressor's share as well as his own.

The boy who shoots an air-gun or a cheap fowling-piece or an india-rubber sling must take second place in the ranks of martyrs. He kills a few little birds and frightens many. He is a nuisance, and should be purified, but he gets far more blame than his actual misdemeanors deserve. Then comes the collector of skins and feathers, the man who supplies museums, private collections and milliners' shops. He is a bad fellow; he kills for money. Still, his slaughterings, numerous as they certainly are, seem insignificant when compared with the enormous decrease of bird-life.

The reports once in awhile made out by zoological societies and other organizations in the interest of natural history study are valuable in a way, but one cannot read them without smelling book-dust where the pure air of outdoors ought to be, and feeling that they are based upon scattered and somewhat insignificant details rather than upon the larger and more generally influential facts of nature and life. This is especially true as regards what has been done in the matter of accounting for the remarkable disappearance of birds from large districts in their natural domain. The gun-bearer, the feather-hunter and the murderous small boy with the sling are not the main agents of bird destruction; and I wish to give a few items of evidence in this connection.

Game-laws for the protection of deer cannot prevent the complete disappearance of those beautiful animals from a country devoted to modern agriculture. When all the woods are cut down, and all the plains are put to the plow, there is no home left for the bear and the bison. Drain the bogs, and what can the woodcock do for a living? Reclaim all the wet lands, and ditch away the waters of ponds and lakes; but after that look in vain for snipe and duck. Destroy the thickets and briary tangles (they are unsight-

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ly and unprofitable on the farm), no matter how necessary they are to the quail, and then look in vain for heaves in the neatly shorn fields. Your bluebirds, that once had the old worm-fences with hollow stakes to build in, cannot accept a barbed-wire substitute; where shall their nests be hidden? What are the gay woodpeckers to do when you carefully cut away and burn every dead tree and bough?

Every summer I am more and more curious to know how the meadow-lark survives, how it succeeds in rearing a brood, when year by year the meadows in which it builds are cut closer and closer with the elanging mowing-machine, and when the seeds it loves are not permitted to ripen. Where do the quails find winter shelter on our highly cultivated and smoothly shorn farms? The food of the wild pigeon is gone, and gone forever are the countless hosts of pigeons. When I was a child the beautiful and magnificent log-cock was everywhere seen in the woods of our country. Now it is rare, save in a few remote wildernesses. Why? Because the rotten wood in which its food is found has been long ago made into heaps and burned by the sturdy men who have caused farms and plantations to supersede the forests.

In the old days of bramble tangles and hazel thickets there were no frozen heaves. Lately I have seen sixteen quails as stiff as icicles in a pitiful little cluster where, all unprotected, the zero weather had caught them, as Tennyson has it, in its "frozen palms." Then the hungry hawks have their will of birds where there is no thick cover for them to hide in, and the farm-house cats, prowling from field to field and from orchard to orchard, devour every fledgling that they can find. By night the owls hunt with the cats. The farmers' pigs, nosing everywhere, eat up all the eggs of all birds that nest on the ground. It is true that the plume-gatherers have killed thousands of herons, but the farmers' drains—the canals and covered ditches whereby vast areas of watery feeding-grounds have been made dry—have killed millions. Fifty years ago the sloppy prairies and quackish boglands of Illinois, Iowa, Indiana, Michigan and Ohio were haunts of countless swarms of migrating herons, geese, brant, duck and crane. Now very few are seen, because this intermediate resting and feeding ground has been unavailable for years. Even the small herons and bitterns, never much shot, are becoming scarce for the same reason. Hundreds of small streams once in their feeding and breeding places are now dry as a bone. Not long ago I revisited a spot where formerly the wood-ducks bred. I found that the wood and the pond had disappeared and there grew a vast field of corn.

Give wild things the least bit of wilderness and they will survive in spite of nature and man. The other day a wildcat attacked a child in one of the oldest settled parts of Indiana. It came out of an unreclaimed ravine on the banks of the Ohio river. I saw a lone log-cock in a considerable wood of the

Kankakee region a few years ago. But you cannot save the birds and at the same time starve them and refuse them both nesting-places and shelter from the cold. Woman's hats and men's guns are hard on birds, but civilized doings are harder on them. Enlightened farming, the making of productive and neatly shorn estates, the march of the plow, the ditching-machine, the underground-tile, the patent reaper and mower and thrasher, the cats, the dogs, the hawks, the owls, winter without shelter, summer without food, spring without nesting-places—these are the agencies that are destroying birds by the wholesale. And then there is the English sparrow, a murrain; seize him! What is left he takes.—Maurice Thompson, in The Independent.

2

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In many of our flourishing farming communities will to-day be found the beautiful golden-brown bread made of entire wheat. This the natural, healthful and strengthening food, and farmers as well as people everywhere are beginning more and more to realize it. The white flour from which bread is usually made is robbed of its gluten and phosphate, the blood-making, brain-feeding portion of the wheat berry. What is left is mostly starch, the inferior element of wheat, that is causing so much lack of development among children and making so many strong adults weak. Even graham flour cannot make a digestible, nourishing bread, and many people's stomachs are too weak to get any benefit from it. This is because the woody, outer husk is ground up with the really nutritive portion, which makes a coarse, heavy and often indigestible food. "Entire kernel" wheat flour, on the other hand, contains all the bone, muscle, grain and nerve-feeding elements of the wheat kernel, without any such objectionable feature as a woody husk. Besides, bread from this flour has a rich, satisfying flavor that no other bread is known to possess. Doctors even prescribe it for invalids and dyspeptics, and cooking-schools everywhere are making a study of what this flour will produce. If our farmers' families, in particular, would use more of this cheap, nourishing food there would be much less of the indigestion and dyspepsia that prevails among them as well as others. Just send for a booklet giving recipes and much valuable information, which can be had free of charge from the Franklin Mills company, of Lockport, N. Y.

2

"I sent you my third order for 'American Women,'" writes Mrs. Doolittle, the sprightly and business-like agent for that book in Springfield, Mo. "I shall now push my work more than ever. I think it a grand book, and am proud to be able to put it before the public. Have nearly filled the blank book for 150 subscriptions, and will soon need another."

## A THANKSGIVING INVITATION

By Hattie Whitney



MOLLIE MINTLEY had just dipped the last golden-brown cruller out of the kettle, and finished with its plump twist the pyramid of queer-shaped fried cakes piled in the tin colander, when the outside kitchen door was pushed in gently and a red hood bloomed into the room like a big scarlet poppy, with a tousley tangle of curls and two shy brown eyes under it.

"Aunt Rusby's got her rheumatiz-zum again bad," chirped the owner of the red hood, "an' everything's in a mess, an' she says won't you come over a few days an' straighten up, Miss Mollie."

Mollie's clearly marked dark eyebrows drew in a little toward her nose. She did not say anything until she had carried her kettle of fat into the pantry. When she came out again her forehead was smooth.

"All right, Patty," she said, "tell your aunt I'll be over in a little while. And help yourself to a couple of crullers, Patty, though I expect it'll make you sick to eat them boiling hot—if anything ever did hurt youngsters." She added the last to herself, as the red hood, tangled curls and fried cakes disappeared simultaneously. Then the frown showed signs of coming back to her forehead.

She set the crullers away in the pantry and went into the sitting-room, where her mother sat beside the big fireplace, with its crackling black-jack logs, piecing a many-hued patch-work quilt of the "piny-hud" pattern.

"Miss Rusby Riddell's laid up again," Mollie announced, in a tone which savored a little of personal affront over Miss Rusby's inconsiderate conduct, "and I'll have to go over a day or two and look after 'em, or they'll all take fits, and those poor little snips of children won't get anything to eat but cold bread and apple sauce. I wish Rusby'd quit having rheumatism or that poke of a brother of hers would get married again."

Mrs. Mintley laughed a mellow, comfortable laugh. She was a little round woman, with soft eyes and an easy gentleness of motion, not at all like Mollie. Mollie was tall, with dark, steady eyes, a clear skin and a chin like that of the goddess of liberty on the silver dollar, only Mollie's chin had a dimple in it.

"I haven't a grain of doubt Rusby'd keep well, just to oblige you, if she had her way," Mrs. Mintley said, snipping a bit of pink calico. "And as for Rick Riddell, be'd turn forty summersets band running, be'd be so tickled, if you'd just—"

"But I don't think I will," interrupted Mollie, crisply. She was a little brusque in her ways, and was generally credited with having her fair share of temper; not that it ever exhibited itself in any more offensive manner than in considerable energy of action and briefness of speech.

She went to the wardrobe in a corner of the sitting-room and pulled down a big cloak, shaking it out vigorously.

"I suppose you'll get along all right, mother, while I'm gone to keep the Riddells from falling to pieces?" she asked.

"Land, I don't see why not?" her mother returned, placidly. "Ain't the mince-meat all chopped, every crock on the place full of seed-cakes and cookies, besides a fruit-cake made, big enough for a church sewing society? You better ask that poor man and his folks to dinner on Thanksgiving."

"You know what that would mean," said Mollie, as she pulled on her mittens. "It wouldn't do. Now do take care of yourself, mother, and don't you scrub while I'm away; and tell father not to let the fires all out at night and freeze my chrysanthemums, and good-by; I'll probably be back Wednesday."

Little Mrs. Mintley sat gazing into the fire for a few minutes after Mollie had disappeared, musing.

"I do wish, Naucy," she said to the matronly old cat who was winking benevolently at the fire, "Mollie'd find out what a good man it is she's been snubbing for the last five years."

Miss Rusby Riddell was sitting dismally by a great, dull-heating stove, with a gray shawl around her and a brown veil tied over her head, when Mollie arrived. She was a thin woman, of good intentions, but apt to take melancholy views of things generally.

"Oh, dear me, Mollie, I'm most dead," she groaned, as Mollie came in, brisk and fresh from the shrill November air; "can't move hand or foot hardly, and nobody to call on but you. Rick's gone to town for groceries, the young ones haven't had a thing to eat but cold pancakes and molasses, the kitchen's in a clutter, and the fire all out—oh, dear!"

"Well, all that's easily mended," Mollie said, cheerfully, hanging up her cloak and coming to the stove.

"Tain't as easy as you'd think," Miss Rusby grumbled on. "And it's a never-ending job to get things straight and keep 'em straight, what with the young ones always

a-coming out of their clothes and always hungry, and the everlasting dishes and beds and cats and dust and mending and bread-making—it's too much for one woman. I'd most give my teeth if Rick'd get married again. But shucks! he won't, not unless you'd—"

"I'm going to fix you comfortable first of all, Miss Rusby," Mollie broke in, rattling the ashes out of the choked-up fire with some clatter. "Then I'll feed the babies and straighten up and have some supper in a little less than no time, so you needn't worry."

She bustled things about in the kitchen vigorously.

"I wish they'd all quit chanting the same old chorus," she sent a stream of hot water splashing into the big dish-pan with an energy that caused it to spatter her neat brown apron. "I don't see why I should be obliged to marry a man because his sister gets laid up with rheumatism every so often. Rick Riddell is a slowpoke; I refused him once, and that ought to settle it. If he'd had any grit he'd have married some one else long ago—and I don't want a man without any grit, and I won't be hadgered into having one."

How Mollie accomplished so much Miss Rusby didn't know, but when her brother reached home after his long, bleak ride he found a tidy house, cheerful fires, his sister almost too comfortable to grumble, his children beaming with the good-natured amiability that comes from a well-filled stomach, and a most soothing aroma of hot coffee and sizzling ham in the air. The table in the dining-room was spread with a red cloth, and Mollie was emerging from the kitchen with a pan of piping hot biscuit.

Rick Riddell was a tall man, and rather slow of motion. His face was serious in expression, but his eyes were clear, brown and cheerful. He shook Mollie's right hand gratefully, while her left still clutched the biscuit-pan.

"It's better than a picnic to have you here," he said, "only you mustn't work too hard." Mollie pushed out her lip, after a little fashion of her own.

"I never did hurt myself any," she returned, with merry scorn, "so you needn't worry about that. But now come and eat while everything's sizzling."

Mollie was down in the kitchen early the next morning, but Rick was there first with a rattling fire in the cook-stove and the big tea-kettle on and already beginning to send out a slender steamy snail into the crisp air.

"I always fill the kettle for sister Rusby,"



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he said, "and I want to tell you, Mollie, never to try to lift it. It's too heavy for you to lift, and a tippy, treacherous thing besides. I'll fill it for you always, and you can dip the hot water out with this dipper. Now I'll scoop out and milk, and then I'll do anything else you want."

"I won't need anything more," Mollie replied, reaching up after the coffee-mill. "I see you've brought in a lot of nice dry chips to heat up with."

"I only wish I could bring in chips all my life, Mollie, for you," Rick blurted out, then set off in a hurry, with his milk-bucket on his arm and his ears looking very red.

Mollie looked rather red herself as she popped into a chair and began to grind the coffee vigorously.

"Why can't he keep off that subject?" was her mental comment. "You can't mention anything from chips to elephants but he or some one else takes it for a peg to hang some kind of an insinuation on."

She tossed the fragrant powder into the coffee-pot and seized the kettle-holder. "I'll not bother to dip the water in," she said to herself. "He must think me a baby if I can't lift a tea-kettle, if it is a good-sized one. 'Tis pretty heavy though—Ouch!"

When Rick Riddell came in with the milk he found the big tea-kettle upside down on the floor in a huge splash of water and Mollie huddled in a chair, holding onto her foot and groaning dismally.

"The old thing hopped right over," she explained, dolefully, leaving Rick to speculate as to whether it was the tea-kettle or her foot that had done the hopping. "Of course, I had no business to be trying to lift it after you told me about it, but I did; and now what are you going to do?"

"First," said Rick, setting his milk-bucket on the table, "I'm going to fix up your foot, which I see is considerably the worse for a hot-water ducking."

"But after that?" demanded Mollie, a little impatiently. "I'm afraid I can't get around to cook breakfast."

"Of course you can't," Rick responded. "But we needn't starve clean to death, with plenty of cold biscuit and butter and grape jam, and I can finish the coffee myself."

He settled Mollie in a big easy-chair in the sitting-room, with her foot comfortably dressed with cool sweet cream, and bandaged, and left her to her reflections while he went to the kitchen. She could hear him whistling and clattering things about.

"It's the first time I ever saw a man act reasonable when anything interfered with his meals," she meditated, wonderingly, recalling how her respected father, whom she regarded as almost a model, occasionally conducted himself, and the curious expression he indulged in when domestic affairs got so far out of gear as to result in irregularities in the commissary department.

Rick's breakfast wasn't a dismal failure, consisting of coffee, toasted biscuit, milk and jam. The children accepted it good-naturedly, and Miss Rushy, whose rheumatism had eased sufficiently for her to join the family circle, declared it was not such a bad meal as might be, only she was not used to having a pickle-plate to eat off.

Nevertheless Mollie was troubled.

"The day after to-morrow is Thanksgiving," she said to Mr. Riddell, "and I wanted to cook up a whole lot of good things for you. Now here I am laid up and can't make even a cookie."

"Don't you fret about that," returned Rick, placidly. "We will all get along if we don't have a cookie. My breakfast didn't kill any one, so I can manage until Rushy gets about; and as for goodies, we like 'em, but I'd think it wasn't being a very good Christian if you couldn't recognize Thanksgiving day without pie and doughnuts."

In spite of which good reasoning Mollie shook her head discontentedly.

"Mother'll send 'em over something," she reflected, "but it won't be like a good, hot dinner. Mr. Riddell," she spoke up quickly, a sudden red dashing into her cheek, "huddle up Miss Rushy and the young ones into the big wagon Thursday and fetch them to our house to dinner. Miss Rushy is so much better I don't think it will hurt, if she wraps up."

Mr. Riddell came and stood at the back of Mollie's chair.

"Mollie," he said, "I don't believe you have forgotten the time several years ago, just the day before Thanksgiving. I asked you if I could come on Thanksgiving day and ask your father and mother if I could keep you always, and you said no, but I could come to dinner, and that would save any man from a broken heart. I don't remember quite all we said after that, but I know I told you not to ask me to dinner again, unless I might hope for something more. If I was anywhere 'huffy' in what I said that has all gone long ago, every scrap of it, and I appreciate your friendship more than you can know. You were always good as you could be to me and Rushy and the children, but somehow you can't realize that physical comfort doesn't satisfy a man's heart any more than it does his soul. The heart needs affection, and Thanksgiving dinners don't fill the bill. I don't blame you a bit, Mollie, but somehow I would rather let the old stipulation stand, that you won't ask me to your house to dinner unless you can give me a little hope as

well. And now don't look cross, little girl, nor worry yourself for fear we'll go hungry. I can make some molasses-cake for the kids, and cook enough things to do, and you can sit in the big chair in the kitchen and tell me how, and to-morrow I'll wrap you up head and ears and take you home in the buggy."

Mollie should have slept well that night, no doubt, but she didn't. Perhaps her foot kept her awake; perhaps it was her conscience, or possibly her heart. At any rate, she reached a point at last where she got comfortable, and went to sleep.

Mrs. Mintley had finished her baking before the day before Thanksgiving, as the pantry-shelves, laden with pumpkin, mince and apple pies, loaves of bread and rolls and a great chicken-pie, could testify. Furthermore, her turkey was ready for the oven, and her cranberry sauce was stewing down into a luscious ruby jelly. And now the industrious little woman was whisking about the sitting-room with a feather duster, brushing away some almost imperceptible flecks of dust from her mantel and window-sills.

"I don't suppose Mollie'll get home much before dark," she was reflecting, serenely, "because she'll want to cook up something for them over there for to-morrow—why, there's Rick Riddell's huggy at the gate now; and my patience, if he isn't carrying her up the walk!"

She dropped the duster helter-skelter and flew to the door, the healthy color in her round face fading out. But a look at Mr. Riddell's very ecstatic countenance and Mollie's roguishly beaming face soon convinced her that nothing very serious had befallen her daughter.

Rick smiled broadly as he deposited his burden in a big chair in the sitting-room and stretched out his aching arm.

"She's a good handful to manage, Mrs. Mintley," he observed, "and I expect she always will be, but I don't regret taking the contract."

"Hey!" Mrs. Mintley looked mystified, whereat Mollie laughed merrily.

"Don't look so puzzled and worried, mammy," said she, "there's nothing much out of the way. I just managed to scald my foot a little, so Mr. Riddell brought me home."

"But—"

"Oh, well," Mollie continued, "as for what he means, it's nothing; only I've invited him and the whole family of Riddells to dinner to-morrow—and they're coming."

#### A SONG OF BLESSING

God's blessing, gentle eyes,  
Upon you for the glance you gave to-day;  
Low 'neath your light my heart your debtor lies  
Striving to find some thankful words to say.

God's blessing, gentle lips,  
Upon you for a tender smile—like this!  
His reddest rose with loveliest crimson tips  
Your parted petals, quivering with a kiss.

God's blessing, gentle hand,  
Upon your downy whiteness, and the touch  
That thrills me so! I cannot understand—  
Hands, lips and eyes, I love you all so much!

God's blessings for you, dear,  
For all you are and all that you may be;  
Your glance, your kiss, your smile, your touch—the mere  
Thought of you! Ah, how dear you are to me!  
—Frank L. Stanton.

The firm of James Leffel & Co., of Springfield, Ohio, is well known throughout the civilized world, where farm machinery, engines, boilers, turbine water-wheels, etc., are used. This is one of the pioneer firms whose goods early took high rank in their line, and, as a result, the industry grew to enormous proportions many years ago.

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The engines are of very strong and substantial construction, and are easily handled and reliable, so that any one can operate them without danger.

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The catalogue also describes vertical and horizontal engines of the portable pattern, and they may be easily transported from one part of the farm to another. The old days of hand-drudgery are rapidly going by with progressive farmers, hence the increasing demand for goods of the Leffel manufacture.

It interested, write for catalogue to James Leffel & Co., Springfield, Ohio.

**Take it off!**

Don't wear your working apron all the time—it's a sign of poor management. Do all your cleaning with

**GOLD DUST Washing Powder**

and you can change your working clothes for resting clothes early in the day. It saves time, work and worry. Largest package—greatest economy.

THE N. K. FAIRBANK COMPANY,  
Chicago, St. Louis, New York, Boston,  
Philadelphia.

**THE LARKIN SOAPS**

THE LARKIN PLAN saves you half the regular prices, half the cost. You pay but the usual retail value of the soaps after thirty days' trial and all middlemen's profits are yours in a premium, itself of equal value.

**Our Great Combination Box.**

Enough to last an Average Family one Full Year.

*This List of Contents Changed as Desired.*

100 Bars "Sweet Home" Soap	\$5.00
For all laundry and household purposes it has no superior. Large Bars.	
10 Bars White Woollen Soap	.70
A perfect soap for flannels.	
12 Pkgs. Boraxine Soap Powder	1.20
Full lbs. An unequalled laundry luxury.	
4 Bars Honor Bright Scouring Soap	.20
1-4 Doz. Modjeska Complexion Soap	.60
Perfume exquisite. A matchless beautifier.	
1-4 Doz. Old English Castile Soap	.30
1-4 Doz. Creme Oatmeal Toilet Soap	.25
1-4 Doz. Elite Glycerine Toilet Soap	.25
1-4 Doz. Larkin's Tar Soap	.30
Unequalled for washing the hair.	
1-4 Doz. Sulphur Soap	.30
1 Bottle, 1 oz., Modjeska Perfume	.30
Delicate, refined, popular, lasting.	
1 Jar, 2 ozs., Modjeska Cold Cream	.25
Soothing. Cures chapped hands.	
1 Bottle Modjeska Tooth Powder	.25
Preserves the teeth, hardens the gums, sweetens the breath.	
1 Stick Witch Hazel Shaving Soap	.10
The Contents, Bought at Retail, Cost \$10.00	
The Premium, Worth at Retail \$10.00	
<b>All for \$10. . . \$20</b>	
You get the Premium you select, gratis.	

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**THE LARKIN PLAN**

**GIVES**

**You the Beautiful Desk**

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**The Whole Family supplied with Laundry and Toilet Soaps for a year at Half Price. Sent Subject to Approval and Payment after Thirty Days' Trial.**

**THE "CHAUTAUQUA" DESK.** Solid Oak throughout. Hand-rubbed finish. Very handsome carvings. Beveled Plate Mirror. Desk is 5 feet high, 2½ feet wide, writing bed 24 inches deep. Drop leaf closes and locks. Brass curtain rod.

**It is wise Economy to use Good Soap.** Our Soaps are sold entirely on their merits, with our guarantee of purity. **Thousands of Families Use Them**, and have for many years, in every locality, many in your vicinity. Ask us for your neighbors' testimonials.

**AFTER 30 DAYS' TRIAL**, if the purchaser finds all the Soaps, etc., of excellent quality and the premium entirely satisfactory and as represented, remit \$10; if not, notify us goods are subject to our order. We make no charge for what you have used.

*If you remit in advance, you will receive in addition a nice present for the lady of the house, and shipment day after order is received. Money refunded promptly if the BOX or PREMIUM does not prove all expected. Safe delivery guaranteed. The transaction is not complete until you are satisfied.*

Many youths and maidens easily earn a "Chautauqua" Desk or other premium free, by dividing the contents of a Combination Box among a few neighbors who readily pay the listed retail prices. This provides the \$10.00 needed to pay our bill, and gives the young folks the premium as "a middleman's profit." The wide success of this plan confirms all our claims.

**Booklet Handsomely Illustrating Twenty Premiums sent on Request.**

**THE LARKIN SOAP MFG. CO., Larkin St., Buffalo, N. Y.**

See Notes Below. Established 1875. Capital, \$500,000.

From *The Baptist Union*: The editor of *The Baptist Union*, speaking from a personal acquaintance of nearly twenty years with the head of this firm, is glad to bear witness to his thorough reliability. The premium offers made are surprisingly liberal, but the test of experience, as well as knowledge of the high standing and character of the firm warrants the statement that the promises made will all be kept.

*Christian Work*, New York, says: The Larkin Soap Co. never disappoint. They create wonder with the great value they give for so little money. A customer once is a customer always with them.

**RHEUMATISM**

Permanently cured by using DR. WHITEHALL'S RHEUMATIC CURE. The surest and the best. Sample sent free on mention of this publication. THE DR. WHITEHALL MEGRIMME CO., South Bend, Indiana.

**SILK REMNANTS FOR CRAZY WORK.**

A big package of beautiful Silk Remnants, from 120 to 150 pieces, all carefully trimmed, prepared from a large accumulation of silks especially adapted for all kinds of fancy work. We give more than double any other offer, and the remnants are all large sizes, in most beautiful colors and designs. With each assortment is four skeins of the very best embroidery silk, assorted colors. Send 25 cents in silver or stamps to Paris Silk Agency, Box 3045, N. Y. City, N. Y.

**Boys & Girls**

We are giving away watches, cameras, solid gold rings, sporting goods, musical instruments & many other valuable premiums to boys and girls for selling 18 packages of Royal English Ink Powder at 10c each. Every package makes 50c worth of fine ink. We ask no money—send your name and address, and we will forward you 18 packages with premium list and full instructions. When you sell the Ink Powder send the money to us and select your premium. This is an honest offer. We trust you. Don't lose this grand opportunity. Write for the outfit today. Address all orders to Imperial Ink Concern, 62 Adams St. Oak Park, Ill.

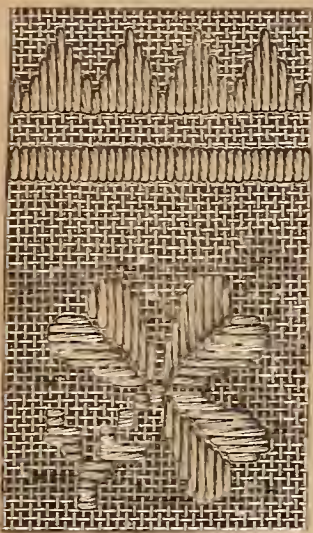
**YOUR PHOTO-ONE CENT**

Our new process miniature photos are all the rage. To introduce we will make one dozen for 12c; 2 doz., 24c; 3 doz. 36c. (no broken dozens). Ivory finish, mounted on cards, and one in each dozen in beautiful silver frame with easel back. Send photo with name and address on back; we return it with photos and catalogue of bargains postpaid. Address Samuel Nafew Co., 392 Broadway, N. Y.

## THANKSGIVING-DAY DECORATIONS

THE custom of observing certain days typifying important events in the history of the Christian world, and sanctioned by law, is strong in our country; and it speaks well for our better natures that we as a people are so ready to observe them and to make every effort to have the observances appropriate to the occasion.

Although Thanksgiving day is not a statutory legal holiday in all of the states, it is generally observed throughout the country.



In New England, perhaps more than in any other section, the religious side of the day is more strictly observed, though, as a whole, throughout the Union the day has come to be looked upon as a day of thanksgiving in very truth.

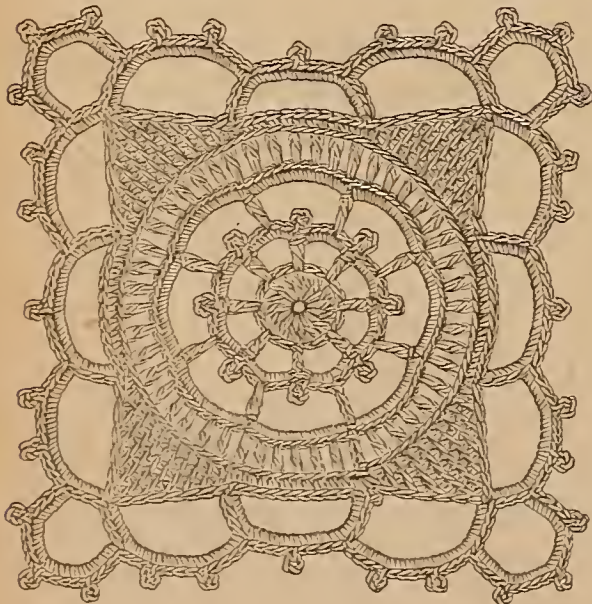
For several years past an unusual effort has been made to apply decorations to home and churches similar to those used at Christmas and Easter; but owing to the fact that flowers are both scarce and high in price at that period, the floral decorations have not been so lavish as on the other occasions mentioned.

It has long seemed to the writer that, so far as decorations are concerned, the season in which a day has been set apart for Thanksgiving was especially favorable for making the occasion most memorable, and certainly more typical, than either Christmas-time or Easter. Especially is this the case in rural communities, where there is usually a dearth of such plants and flowers as are used out of their season of outdoor growth.

This year the harvest of field and orchard has been a most bountiful one, so that in all sections of the country we will have at hand the materials for decorations, which, as I have said, would be peculiarly appropriate to the occasion.

Then, too, in most parts of the country, unless the ground be covered with snow, field and forest will contribute to our decorations with a lavish hand and in great variety. But everywhere we will have the golden grain, the ripened corn, the fruits and the vegetables, and in some sections the late garden flowers, such as chrysanthemums, marigolds, zinnias, asters, delphiniums, etc.; so that nowhere would there be lack of material, nor, if the following simple directions are carried out, would the task of decorating be difficult.

The reader will observe that the same skill



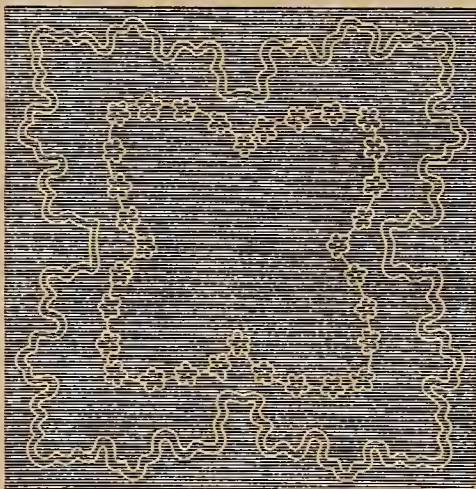
in arrangement, the same regard for harmony and general effects, have been carried out in the use of these products of field, farm, forest and orchard as with the choicest products of the floral kingdom.

The plan for appropriately decorating a church in which to hold Thanksgiving day services will doubtless appeal to a great many of my readers, so that I will devote space to this work first.

One of the essentials in decorative work—

and this applies not only to floral decorations, but to any decorative work—is to have the various materials used in perfect harmony with the surroundings and with each other; not only as regards colors or shades of colors, but as to size. Therefore, in the decoration of a church or other large building we must always remember to use not only large flowers, but when greens of any kind are used, to have branches of large size rather than twigs, though many of the latter be bound together. Small, delicate flowers which would be charming in the drawing-room are lost to view or fail in the desired effect when used in a large building. Selecting the average church for our plan, built as they usually are with a platform of generous dimensions, we will proceed to decorate it. What we use as a background for our decorations will depend largely on the interior finishings of the building. If, as in most churches in small towns and villages, the wall space back of the pulpit is ordinary undecorated white finish, large branches of oak with their leaves in autumn dress may be used with fine effect; fasten these branches to the wall sufficiently thick to completely hide the white behind them. Should the space back of the pulpit be broken with stained glass or memorial windows, and with well-finished woodwork, then lighter branches of the oak or branches of laurel or holly may be used to cover the spaces between windows.

Around the edge of the platform fasten a broad band of unthreshed oats. Arrange them loosely and naturally, fastening with tacks and strings. At either side of the steps leading to the platform, both on it and at its base, stand a large sheaf of the oats. Arrange baskets or boxes, some containing purple grapes, some with corn in the ears, bright red or yellow apples, and also branches

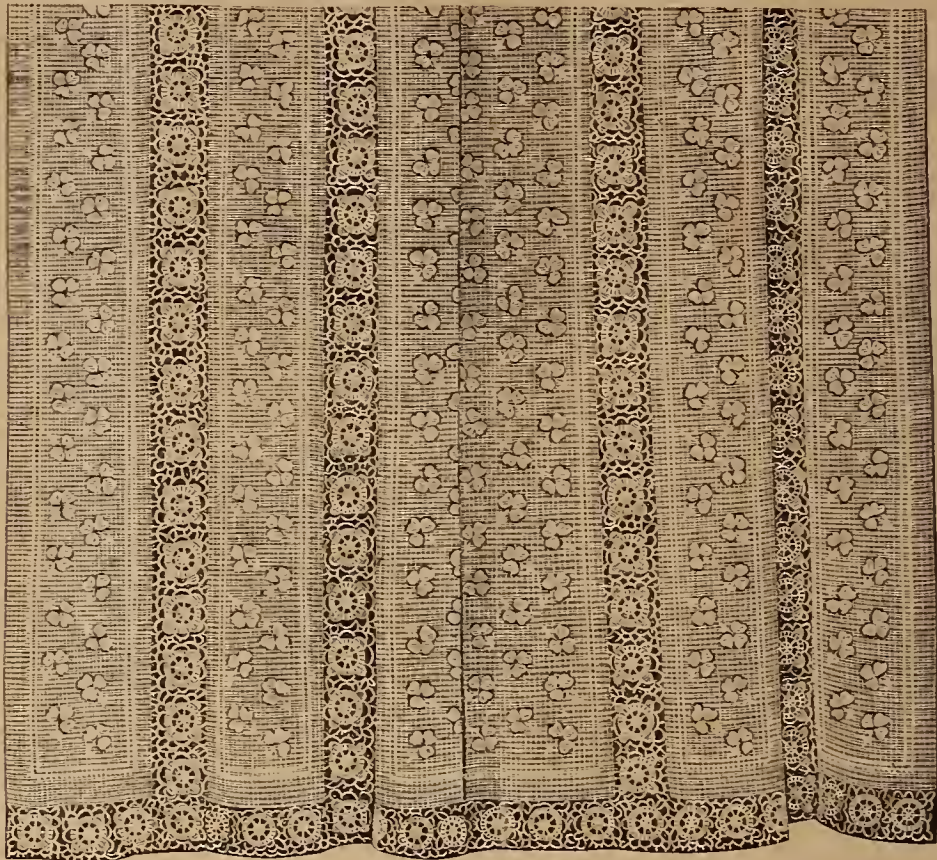


of bright autumn leaves. Place these at intervals along the edge of the platform, arranged so that they will face the audience, but the baskets or boxes concealed by the border of oats. This will give color to the decorations. The reader will perceive that the plan is to mass these bits of color rather than to dot them here and there through the border of oats, when the effect aimed at would be entirely lost.

In front of the reading-desk and on the platform, if there is room—if not, on the floor proper of the building—place a strong table holding a vase filled with long-stemmed flowers, like chrysanthemums, in the center; surround this with selected fruits and vegetables, such as small squashes, both green and yellow, red and green peppers, carrots, with their tops if possible; parsley and celery would add a desirable touch of green and white. Arrange these vegetables in careless profusion on the table. From the edge of the table to the floor make a bank of flowers, or green cedar boughs would answer, so that the table would be wholly concealed from view.

To carry the scheme of decoration to its fullest extent the side walls or the front of the gallery, if there is one, should be decorated, and here is a little "trade secret," if it may be so called. Many visitors at profusely decorated churches wonder how it is possible to have the work they see done in the short space of time often allowed the decorators. It is quickly and easily done by the use of wire netting of various widths and sizes of mesh. This netting is the kind

used for poultry-yards, and is inexpensive. Stretch it across the space you intend to decorate, and fasten it in place with a few screws, so as not to mutilate the walls or woodwork; the stems of the greens or flowers, as the case may be, are thrust through the meshes of the netting, and held in place when necessary with twine. Be careful, of course, to completely cover the wire. The use of this wire netting will obviate the necessity for using tacks or nails, which so



mutilate walls and woodwork; it also does away with the tedious work of making wreaths and garlands, and is a great saving in material.

For these larger decorations any green procurable may be used, such as laurel, holly, cedar and the like. Wild buckwheat, which can be found in the fields near old fences, and is of a rich red-brown color, is an effective wall decoration, and has the added merit of being light in weight. Large perfect stalks of field-corn may also be used to advantage, though pop-corn is preferable, being of a more delicate habit of growth; if possible, use stalks having the ears of corn attached, and pull back the husks so that the ripened kernels will show. Dried ferns, wild-rose branches, with their ripened seed-pods of bright red, reed-grasses, wild-carrot tops, stalks of dry dock-seeds, dried heads of goldenrod which have turned to a creamy brown, with the unthreshed heads of wheat and rye, are all available for decorations, and are most effective.

In home decorations at the same season of the year many of the fruits, flowers and grains may be utilized to advantage. For example, an unused or false fireplace in a room could be made very attractive by decorating it on the following plan: Fill in the fireplace proper with large clusters of goldenrod, wheat, rye or oat heads tied loosely in branches, with a few light stalks of corn through which would peep an ear or two of bright red or yellow corn. At either side of the hearth fasten upright a few stalks of pop-corn, or field-corn, if not too bulky, with the ears attached if possible. On the mantel place several vases or glasses filled with dried ferns from the woods, being care-



ful that this center decoration is higher by several inches than the corn-stalks at the sides.

As has been said, enough of this material is at our very doors, so that the humblest home may be made brighter and take on an added attraction at the season of thanksgiving.

In both the church and the home decorations the changing of what fresh flowers are used, when faded, will keep the whole display perfect for many weeks.

GEO. R. KNAPP.

## COUCH-ROBE

With new styles in couches one must have new robes as a cover. The pillowed couch has become a necessity in every home, and many indulge in two or three.

The robe illustrated is worked in Bulgarian wool upon Java canvas strips joined with insertion made of squares of crochet-work. As the canvas comes in many different colors, it would be best to select one that would harmonize with the couch. If it is

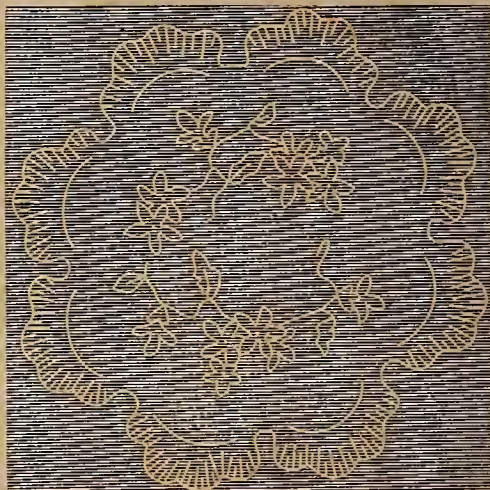
intended for durability, use black canvas, with the clover-leaves worked in harlequin colors; if dainty, use the delicate taupe or cream, work the clover-leaves in green and the insertion in three shades of green and three shades of pink.

It gives quite a scope for one's own individual taste, and could best be developed in colors to suit the room it is to occupy.

E. B. K.

## THREE DAINY PINCUSHIONS

The busy girl who sits all day at a desk has not time to make many gifts of her own handiwork, yet she loves the dainty things



in needlework that those having more leisure make for their friends. It is for her that these simple pincushion-tops have been designed.

The tiny cushions are always useful, and therefore always acceptable. It is easier better if lined with the thinnest of erin-stuffed. Cover them with silk of some pretty light color, and make a large puffing all around. This will be found to set out much better if lined with the thinnest of crinoline or stiff, white goods. Use fine linen for the covers, and let the work be beautifully done. It will be appreciated far more than a large piece of work, which must be hurriedly finished at the expense of eyes and patience.

For a friend who rejoices in a blue and white room the forget-me-not cushion will be charming made up with silk of the peculiar shade of pink that the tiny buds first show. The edge is to be in white silk filo floss of the same quality as that used for working the flowers.

The Western cousin who never pushed the snow from the first "May-flowers" will be delighted with the trailing-arbutus design, and it must be done as daintily as possible in pink and white. A puff of either pale green or white silk may be used, and the edge worked in long-and-short stitch.

The hepatica, too, is unknown to the girl who lives on the prairies, but her mother

has often told her of the pretty flowers she gathered when a child, so this hepatica pin-cushion will be welcomed with delight. The flowers may be worked in pale purplish pink, white or dull, light blue, or all colors may be employed. The edge is long-and-short stitch, with a single line following just inside, and the cushion itself may be of any pretty color which harmonizes with the flowers.

One who handles the brush more easily than the needle might utilize these designs for bolting-cloth, and they could also be adapted to china-painting, for bonbon-dishes, powder-boxes and other small articles.

ALICE MATHER.

### THANKSGIVING TIMES

As we read and listen to the stories of olden times, brick ovens and their bakery, and of quaint old-fashioned fireplaces and flaming back-logs, we find ourselves wishing for a glimpse of old times, styles and methods of dispensing Thanksgiving hospitality, and a taste of the eventful feasts of our great-grandparents' days.

But the past is past, and it is in the present and the future that you and I are living. And the hospitality of olden times is ours to dispense, if we will, with as lavish and hearty good cheer as ever was given before the dawning of our own day of the world. It reads to us like ancient history, and indeed is, in a sense of the word, and is full of pathos, interest and inspiration.

We may not entertain our friends on Thanksgiving day after the manner of the much-quoted olden times, for surroundings are all so different now. Neither may we be able to entertain them after the style of the "most approved" manner of the new. But hospitality may enter into and become the most enjoyable feature of our Thanksgiving-day entertainment of friends. It is ours to give, and it is ours to receive, and we hope we are capable of both giving and

than half spoiled. One's face will betray it all if one has attempted more than either health or purse could withstand easily, and it is but foolish waste of strength and energy to have sought the unattainable. If the heart keeps saying, "I'll be glad when Thanksgiving is over," let the day go by without an attempt at entertaining. For did one's friends but know it, one would never be troubled with their presence.

Hospitality and a cup of tea are preferable by far to the elaborate feast and board and an unattractive, tired-faced hostess.

It was in the long ago, we must remember, that Thanksgiving was kept with solemn sighs and speeches, and solemn sermons made the festivities (?) of the day sad and grave rather than bright. But our Lincoln, that all the world loves and honors and reveres, revived the true spirit of the day by proclaiming it a day set apart for thanksgiving and praise, for reunions and joy, and for happiness and glee.

It took so little, in comparison, to make our Puritan fathers thankful and happy, and it takes so much to put the present generation into a really thankful state of mind. We demand and expect so much, while they, with truly grateful hearts, thanked a kind Father and Providence that to each person of their colony there could be, or was, allowed one pocket of corn-meal each week.

It puts us into a more thankful frame of thought when we turn to the history of the first Thanksgiving day that was ever kept—that history of the little log cabin in the New England forests, where brave though heart-sick men raised their voices in prayer because He, their Father, had sent to them the long-watched-for ship of relief, and sent it just in time to save them from actual starvation.

Our own surroundings may not be all that we have wished for, all that we have hoped and planned for and believe that we should have. Many are tempted to declare their

### A JACK-KNIFE PARTY

I spent a pleasant evening recently with eighteen of my Sunday-school children. I invited them to come to my house a certain evening, each bringing a jack-knife. As they assembled I gave each child a number. Around my dining-table I placed a row of eighteen pumpkins, each one numbered. Before going to the dining-room the game was explained. A prize was offered for the best Jack-o'-lantern. The judges were to con-



sider the work regardless of size of pumpkin. Each pumpkin was to be named. After all were done lighted candles were arranged inside and the Jack-o'-lanterns were placed in a row on the porch, for the judges. After refreshments were served each child took his lantern and disappeared in the darkness.

ANNA P. SHEPPARD.

### ARE YOU LOSING FAVORITE BEGONIAS?

Don't worry over the apparent loss of a favorite begonia unless you are sure that it is not one of the varieties that require a period of rest each year. Many varieties demand a resting spell, although their owners seem ignorant of the fact and become very much discouraged when the plants begin to look pale and drop their leaves, and in some cases even drop their stalks, little by little. Do not try to force them into fresh growth when they show these signs of needed rest, but set them aside for awhile and let nature take its course until ready to send up new growth, then encourage strong development with water and careful cultivation and judicious fertilizing.

S. W. H.

### AN INEXPENSIVE GRILLE

Take rope as thick as your finger—soft cotton preferred, because it is much easier handled. Remove the transom. Measure the rope into exact lengths required, allowing three quarters more at each end. Tie the ends securely before cutting. With an auger bore holes at regular intervals along the top and bottom of the transom-case, insert the ropes, fasten securely (after stretching firmly) with staples and glue, and if you wish, paint or stain any color you prefer.

M. M. M.

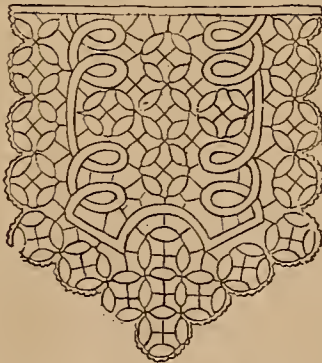
### POINT-LACE AND HONITON WING

These wings are largely worn for hat-trimmings, and a pair of them form a handsome jabot. Twenty-four inches of fine Honiton braid and twelve inches of point-lace braid will be required for a single wing. When used upon bats, a fine, silk-covered wire is sewed around the edge, which enables one to bend the wire into a graceful curve.

MRS. L. H. MILLER.

### END FOR TIE IN BATTENBERG LACE

This dainty article of woman's dress is always attractive in lace, and Battenberg lace is now the leading fancy-work. Any



one who can sew neatly can make one of these as a dainty gift for Christmas. This pattern (No. 40) stamped on pink muslin is furnished for ten cents.

### POINT-LACE BUTTERFLY

These butterflies are largely used for trimming dresses and hats, and are worn upon the hair. In the one illustrated the stitches are plainly seen and are not complicated.

MRS. L. H. MILLER.

## FEED CHILDREN



**THEY NEED** its rich, flesh-making gluten and bone-making phosphates. As well feed children laundry starch as many white-flour starchy foods. Infant mortality is largely the result of too much starch in the food.

### For Children and for Grown Folks WHEATLET

is a remarkably healthful food. Wheatlet contains only the nutriment of the whole wheat. Sold in 2 lb packages.

If your grocer does not keep Wheatlet have him order some for you, or send us his name and your order—we will see that you are supplied. Avoid substitutes.

Send for booklet.

The genuine bears our label and name and is made only by the

Franklin Mills Co., Lockport, N. Y.



## A NEW DRESS FOR TEN CENTS

It is Easy to Make an Old Dress Look New with a Ten-cent Package of Diamond Dyes

Almost every woman has one or more dresses that are of good material but faded or of unfashionable color. With a ten-cent package of Diamond Dyes you can color any one of these dresses to look like new, thus getting practically a new dress for a trifling expense. Diamond Dyes are prepared specially for home use, and the simple directions on every package make it impossible for any to fail with these dyes. It is but little more trouble to use them than it would be to wash the fabric.

You can color anything any color with Diamond Dyes. Dresses, cloaks, wraps, feathers, stockings, ribbons, can all be made to look like new with these great money saving dyes. They make absolutely fast colors that are true to name, and give results superior to much of the dyeing done by job dye-houses.

To get the best results it is always necessary to have different dyes for cotton and wool, and on this account there are some fifteen Diamond Dyes specially prepared for cotton and mixed goods. Be sure to get a cotton dye if you wish to color cotton or mixed goods.

Never allow a dealer to sell you something else when you want Diamond Dyes, even though he can make a larger profit on the imitation. Diamond Dyes have stood the test of years of use, and are the original package dyes for home dyeing.

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to wash as clean as can be done on the washboard and with much more ease. This applies to Terrill's Perfect Washing Machine which will be sent on trial at wholesale price if not satisfactory money refunded. Agents Wanted. For exclusive territory, terms and prices write PORTLAND MFG. CO. Box 4, Portland, Mich.

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Just the thing for cyclists, in fact, every lady, young or old. Price 25 cents, by mail. Agents wanted.

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We send our monthly 16-page, 48-col. paper devoted to Stories, Home Decorations, Fashions, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents, if you send the names and addresses of six lady friends. **WOMAN'S FARM JOURNAL, 4311 Evans Ave., Saint Louis, Mo.**

receiving, gracefully and graciously. One need be none the less the polished, agreeable hostess because of limited means. One's home may be neat and attractive, and one's table pretty and inviting in appearance, though it does not bear the token of wealth in elaborate napery, rare china and silver, and is not loaded with the more expensive edibles of the market.

We shall celebrate the day, of course. We trust that we shall not forget to sound the word of thanksgiving and praise to One to whom we owe all. "We shall meet, but we shall miss him," the sad refrain of thousands of hearts that through death have been made sad since the passing of last Thanksgiving day. For sorrow with joy is the sad portion that all must accept as it is passed on to them. It is the inevitable and the fate of all. We shall not forget the loved ones "gone before." The tear will start unhidden as we gather home or as we meet in the homes of friends. The souls of anguished hearts will be stilled, that personal griefs shall not mar the pleasures of the hour of one's guests and one's friends about them. And yet

We loved them so, and miss them—  
God alone can know how deep,  
Of anguished hearts the bitterness,  
Angels e'en must turn and weep.  
Over homes bereft of loved ones;  
Over hearts with grief, 'most wild;  
Over souls in meekness crying;  
Oh, pity, pity, God, thy child!

All formality toward one's friends will be dispensed with. They shall be received upon the footing of "home-folks," and shall be made to feel thrice welcome and to enjoy the day throughout. If we would give pleasure and happiness to guests undue emphasis must not be wasted upon the table and too little be given to the physical condition of the hostess when the day of thanksgiving has brought its guests about the board and into the house. Countenance and actions speak louder than words. If the housekeeper be wearied and worried the day is more

blessings "so few and far between" that of things to be thankful for they have none. But how can we be so ungrateful and unjust in judgment? We have frequent reminders that "nothing in our lives is so bad but that it might easily be worse."

Looking into the distress and poverty of the world doubt of the statement does not seem so very wrong sometimes. But conditions and circumstances with you and I have never been so bad but that they might very easily "have been worse."

Let some sorrow-stricken friend be one's especial guest of honor this season of Thanksgiving-time, if one has so unfortunate and unhappy a friend. I have one, and the very thought of her awakens a chain of memories of the darkest day I have ever known to come into the life of living mortal. I lived the first of those days with her, comforting as best I could, and ministering to the best of my ability, and the intervening days betwixt the now and then I have lightened and brightened as best I knew how. But through the perfidy of one who called my friend her friend, and took from her her all—her very heart and soul and life, —and left her to grope alone in wretchedness of heart-existence, praying daily for death, she finds no ray of sunlight in the world. To her it is all a mystery that birds can sing and that the world can go on in the even tenor of its way.

We have all some one to comfort and to cheer. We have all so many things for which to be thankful and glad. We have all a duty to perform in the world. We have all too much to do to sit down in idle re-pining, and to drift into discontent and rebellion. Therefore, we can ill afford to let our coming Thanksgiving day pass by unheeded and unhonored. Let it be with us all "a feast of reason [as well as a feast of provisions] and a [veritable] flow of soul."

ELLA HOUGHTON.

In its incipency, nearly every case of Lung and Throat disease is curable if promptly treated with Jayne's Expectorant.

## A GOOD FINGER-BANDAGE

THE usual form of bandages for bruised or mangled fingers is ordinarily unsatisfactory or bungling from an abundance of cloth, which is of very little use in the healing of the sores. It is, therefore, not without interest to know that there has been devised a bandage which both for convenience and

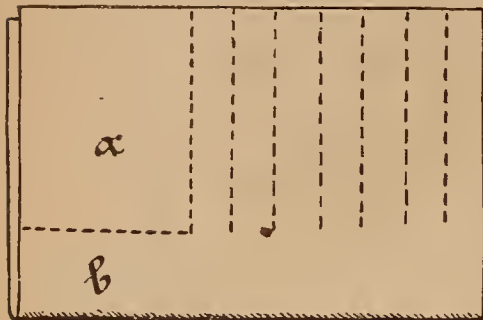


FIG. 1

safety, and for the ease with which it is made, deserves to be widely known. The making and applying of this bandage may be thus briefly described:

Measure a piece of cloth twice the length of the finger, and cut it square. Fold the cloth double, as in Fig. 1. Cut out the square (a), and remove it. Then make the seven "tails," as shown by the dotted lines. Open the bandage, and place it in position, Fig.

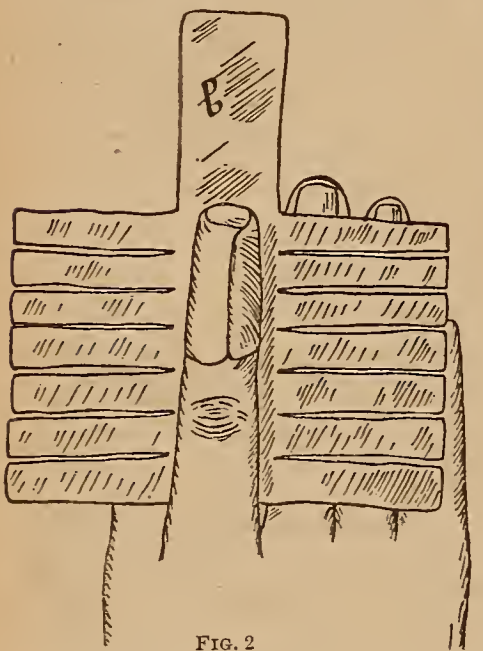


FIG. 2

2, the hand lying palm down on your knee. Then turn the flap (b) over the finger, and tie the first corresponding set of tails over it in one knot, leaving the ends loose, to be covered by the tying of the second set of tails, as shown in Fig. 3. The remaining pairs of tails are all tied in the same manner, the last set being fastened in a double knot. In tying the tails, draw them

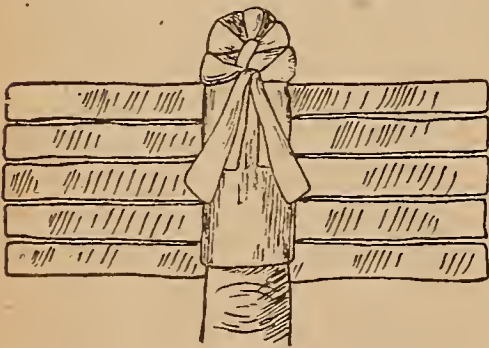


FIG. 3

snug, but not too tight, as the blood circulation must not be stopped.

In medical circles this is known as the Hermance bandage.

Where mishaps are likely to occur it is advisable to keep a supply of this bandage in stock.



## HOME TOILETS

I read a story not long ago of a woman who was an immaculate housekeeper; in fact, she worked so hard and spent so much time sweeping and dusting, scrubbing and scouring, that she had little time left to devote to her own personal appearance or that of her children. One Saturday she spent all the morning cleaning the dining-room, polishing the furniture, etc., and then came to the dinner-table in an old, faded dress and unkempt hair, to hear her husband say, "The room looks very nice, but your appearance does not correspond. I would rather see you and the children neat and trim, even if there was not quite so much shine on the furniture."

I believe all men feel very much as this man did. They do not like a house kept in such order and neatness that they feel they are being watched all the time for fear they will make a little dirt in some way

or disarrange the order of a room, but they do like to see wife and children looking their very best.

The mistress of the smallest and most modest home may always look well if she will give the matter a little attention. Even while doing her own cooking and housework in the morning she can keep herself neat and trim in appearance.

I know many women who love pretty and dainty things are obliged to study the matter carefully to make their wardrobe what they wish it to be, and in too many cases, in the desire to have pretty things for evening and outdoor toilets, they slight the morning and think anything good enough to wear while doing their work. This is a mistake. Begin the day right, and there will be no going backward; if the morning dress be neat and tidy, no fear but what the whole day will be kept up to the standard.

Opinions differ as to what is the best material for morning dresses. For myself I like a cotton shirt-waist and a black brilliantine skirt for both summer and winter wear. For winter make a thin flannel waist, cut and fitted to the form and without lining, to wear under the shirt-waist for warmth; or one can find wool jersey waists in the stores made for this same purpose. Next have a half-dozen large gingham aprons to wear in the kitchen. Have the dress-skirt clear the floor all around, and make the apron as long as the skirt, to almost meet at the back, and with a generous bib; also have half-length sleeves of the same material, with elastic top and bottom, to draw on over the dress-sleeves. When a meal is ready, slip off your apron and you are neat and ready to go to the table. If one prefers to wear cotton dresses all the year, an extra skirt and the flannel underbody will make them sufficiently warm.

The art student of my family has a painting-apron which is a good model for a house-keeping apron, as, in fact, she used it for that purpose during vacation. The waist part is cut alike back and front, and gathers in the middle, both at the top and belt. It buttons in the back, and the skirt is cut a gores front, two side gores and a straight width in the back. This apron may be made with sleeves or without, and have half-length sleeves to put on separately. You can cut two side gores from one width of cloth by folding it as here illustrated, and turning one gore bottom side up. Gather the skirt slightly to the belt all around. In warm weather this apron may be worn without a dress, only a thin shirt-waist under it, as the skirt is whole.

MAIDA McL.

## THE LITTLE PLACE AT HOME

I suppose it hasn't altered, the little place at home;

There's the well-sweep, there's the dairy, there's the door-step just the same.

Only mother's gone! And strangers would not know me should I come

Through the twilight to the old place; may-be wouldn't know my name.

The white lilacs by the window—leafless in the wintry day—

But I knew those plumes of sweetness wooing to the May-time bees.

They will bloom again to-morrow, as they bloomed but yesterday—

And the dear old apple orchard shows the same dear rows of trees.

It is still the old place, only not a soul I used to know

Lives in that sweet bit of Eden—some are gone across the sea;

Some are safe in God's fair haven—went there years and years ago;

Some are only pauper rich men, heaping silver up like me.

With a memory of the old place tugging at them in their dreams—

With a hunger for the old place, and the boyish hearts they had

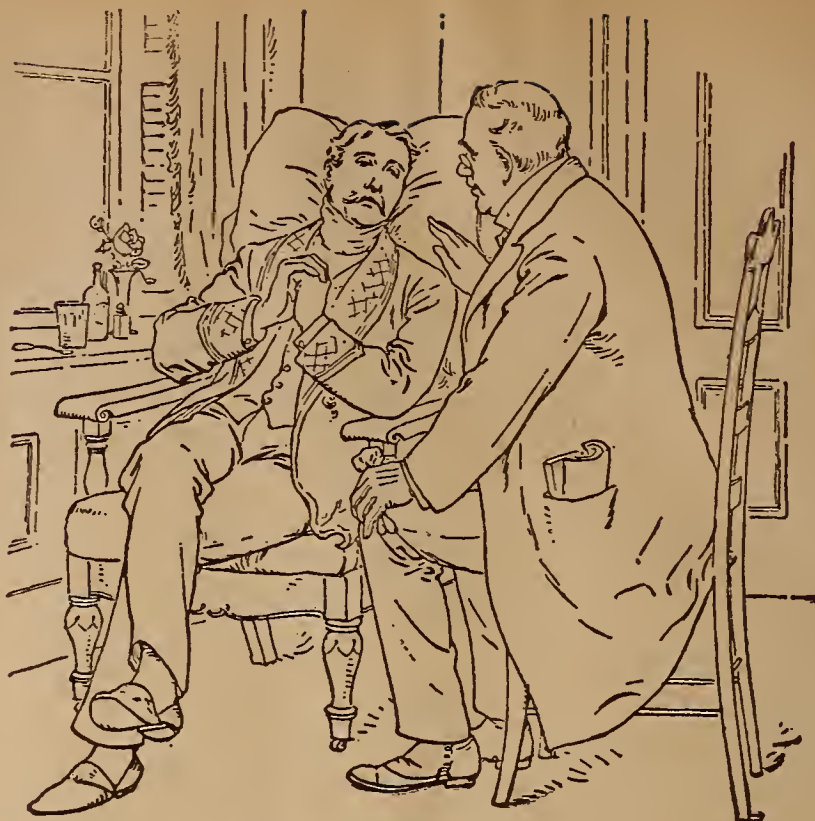
When the sunshine did not reach them fitfully in fading gleams.

When they had their home with mother, and were young and poor and glad.

—Margaret E. Sangster.

## VARIATIONS ON THE OYSTER THEME

The oyster is so good of itself that it is a hard thing to spoil it entirely in the cooking process, though it may have varying degrees of goodness, depending on the skill of the manipulator of frying-pans and stew-kettles; but to realize its possibilities, to enjoy its full flavor, why, then you must take a trip to the eastern shore of Maryland—that paradise of epicures. Having done this, you will, for the rest of your life, ask the ques-



"Doctor, what is free alkali?"

"The alkali used in the manufacture of soap is a strong chemical and is destructive of animal and vegetable tissue."

"Pure soap is harmless, but when the soap is carelessly or dishonestly made, alkali is left in it and it is then said to be 'free.' Soap containing free alkali should not be used where it may do damage."

"In the medical profession, in sickness, in surgery and in the hospitals we use Ivory Soap because it is pure and contains no free alkali."

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tion, "Why, oh, why don't they taste the same anywhere else?"

Perhaps it will be impossible to follow my advice; in that case try some of their ways of cooking the succulent dainty. As our old black auntie used to say, "Don' yo' be skearce wid de lard," if the oysters are to be fried, and have it smoking hot; when it gets full of cracker-crumbs pour off into another skillet.

FRITTERS.—To one pint of milk add a little salt and one egg, beaten light. Stir in flour enough to make a stiff batter, in which one heaping teaspoonful of baking-powder has been sifted. Now add one solid pint of oysters; they will thin the batter to proper

consistency. Fry in hot lard, and serve at once.

PANNED OYSTERS.—Drain one pint of oysters. Put a piece of butter the size of a walnut in a hot pan, and when melted, but not browned, put in the oysters. Stir constantly until the edges curl, then serve in hot soup-plates. This makes enough for two persons.

OYSTER CROQUETTES.—Chop the oysters, and then measure; take an equal quantity of cold mashed potatoes, season to taste, moisten with a beaten egg, make in balls or cakes, dip in cracker-crumbs, and fry in plenty of hot lard. Garnish with parsley, and serve.

MARY M. WILLARD.



A young medical student, living in West Hebron, N. Y., explains some severe difficulties he has encountered in spite of his professional training. "After eating a hearty meal," he says, "I would have an uncomfortable feeling of fullness and would raise gas. Of course if this had continued I would have been a good case for some doctor. In the morning I would have a feeling of nausea and sometimes would vomit. Seeing an advertisement of Ripans Tabules, I sent for two packages and took a Tabule after each meal. Before I had taken two boxes I was completely cured of the disagreeable feelings. I occasionally take a Tabule when I feel the need of it, and I now have as good a digestion as anybody would want. If any one doubts this refer him to me."

A new style packet containing TEN RIPANS TABULES in a paper carton (without glass) is now for sale at some drug stores—FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (120 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—or a single carton (TEN TABULES) will be sent for five cents.

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## SUNDAY AFTERNOON

### THE HAPPIEST HEART

The rust will find the sword of fame,  
The dust will hide the crow;  
Aye, none shall nail so high his name  
Time will not tear it down.

The happiest heart that ever beat  
Was in some quiet breast  
That found the common daylight sweet,  
And left to heaven the rest.

—From "Out of the Silence," by John Vance Cheney.

### FRONT THE SUN

**A**N Eastern story tells of a king that tried in vain to mount his horse. The mettlesome animal plunged and reared and could not be controlled. But there stood near by an observing groom, who quietly said, "The horse has caught sight of his own shadow stretching in front of him. Turn him around so that he faces the sun and his terror will pass away." This was done, and the groom proved to be right.

It is easier to moralize over this little tale than it is to practise one's moralizing, for it teaches the folly of facing our worries instead of our joys—the sin, indeed, of facing our unrighteous self, when we should be facing the sun of righteousness. "He is standing in his own light" we often say of a man who hinders his own worldly advancement. Is any "standing in one's own light" half so serious a misfortune as turning one's back on the sun of faith and hope and good cheer?

The regiments of Chickamauga whose colonels chose for them the hot, sunny meadows grumbled loudly, and envied the troops whose tents were pitched under the cool trees; but when malaria came it left the meadow camps alone, and then the growling stopped. Take a liquid that will putrefy, and place some of it in a bottle exposed to the sunlight, and another portion of it in the dark, and the former will keep sweet, while the latter becomes filled with deleterious germs. And just what God's sun of burning vapor will do for the pestilential miasmas of earth that same victory will be gained by God's spiritual sunshine—by trust and laughter and optimism—over the far more noxious disease that we call despondency.

And the sunshine is so plentiful—both kinds of it! Dr. Pentecost imagines an invalid whose physician has prescribed sunshine, and he goes out in the street where the shadow of his house lies cold and damp, and looks longingly across to the other side, all bright and sunny, and he says, "Oh, it is cold, and I am so chilly! I wish I could get a little of the warmth of the sun about me. I suppose I must walk up and down here as briskly as my strength will allow, and then I shall feel better; and by and by, when I get warmer, the sun will have gotten around so as to shine on my side of the street."

Yes, it is so easy to get away from our shadows; as easy as turning the horse around; as moving out from under the trees; as crossing the street. All we have to do is resolutely to turn our backs on ourselves; to drop from our thoughts our selfish plans and fears and doubts and discouragements and failures; not forgetting them—that might seem impossible—but what amounts to precisely the same thing, burying them under thoughts of Christ and of Christ's desires for us.

In one of Matthew Arnold's most beautiful poems he pictures a pale weaver working disconsolately at his task in a squalid street. Soon after meeting him he comes upon a Christian preacher, cheery and hopeful in the same disheartening surroundings, with sickness and overwork pulling him down. "How fare you in this scene?" asks the poet. "Bravely!" is the reply, "for I have been much cheered with thoughts of Christ, the living Bread." And the poet's conclusion is the sum and substance of it all:

"O human soul! so long as thou canst so  
Set up a mark of everlasting light  
Above the howling sense's ebb and flow  
To cheer thee and to right thee if thou  
roam,  
Not with lost toil thou laborest through the  
night!  
Thou mak'st the heaven thou hop'st indeed  
thy home."

—Christian Endeavor World.

### HAPPY OLD AGE A CHARMING THING

To women the loss of beauty is so sharp a trial, the change from the grace and slenderness of girlhood so severe a discipline, that there is commonly a touch of acrimony in the phrase with which she sets aside some pet decoration or some fashion which it would be ridiculous to assume.

Unless she can put all this away, and take in their place the sweet calmness of later life, to render her face lovely and lovable, and for the rose that has faded on her cheek can substitute that smile which some women wear who have conquered and found peace in their victory, she will lose that rarest beauty which comes with happy old age.

When a good and clever woman has reached that beautiful tableland of life from which she look over the many battles on its plains, and yet feel sure that life is worth living, and men and women worth loving, she has nothing to envy in those just beginning.

To learn the use of gentle, regular exercise and sensible and invigorating diet; to keep every power at its utmost output of activity; to keep in touch with the day, and temper its ardor by our knowledge and experience; to be a balance-wheel for the complex machinery of a modern household; to strive to look as freshly neat and as fastidiously careful as in the days of youth are not easy tasks; but when a woman so meets her old age she is of more value than any other member of the family circle, and need not sigh for any hour of past importance.—New York Evening Post.

### SELF-DENIAL

Self-denial for the sake of self-denial does no good; self-sacrifice for its own sake is no religious act at all. If you give up a meal for the sake of showing power over self, or for the sake of self-discipline, you are not more religious than before. This is mere self-culture, which, being occupied forever about self, leaves you only in that circle of self from which religion is to free you; but to give up a meal that one you love may have it is properly a religious duty, because made easy by affection. To bear pain for the sake of bearing it has in it no moral quality at all, but to bear it rather than surrender truth, or in order to save another, is positive enjoyment as well as ennobling to the soul. Did you ever receive even a blow meant for another in order to shield that other? Do you not know that there was actual pleasure in that keen pain far beyond the most rapturous thrill of nerve which could be gained from pleasure in the midst of painlessness? Is not the mystic yearning of love expressed in words most purely thus, Let me suffer for him? This element of love is that which makes this doctrine an intelligible and a blessed truth. Sacrifice alone, bare and unrelieved, is ghastly, unnatural and dead; but self-sacrifice illuminated by love is warmth and life; it is the death of Christ, the life of God, the blessedness and only proper life of man.—F. W. Robertson.

### CONFIDENCES

It is better to be too reserved rather than too much given to confidences with ordinary acquaintances. The most momentous affairs of your life are of little consequence or interest to the greater part of the people you meet. What you have suffered or done is of little moment to them. You may be burning with your wrongs, and bursting with anxiety to relate them to somebody, but to ninety-nine out of every hundred people you meet the story would be only faintly amusing. It would hardly be remembered by them two hours after you had told it.

It is a good plan to think over these truths, to keep them in one's heart, and to promptly quench in one's self that longing to tell our "little tale of woe" to any one who will sit still and listen to it. We are not likely to be sorry that we refrained from speaking. We may be sorry that we did speak.

The bitter lesson that we, as individuals, are of small account to the world at large is one not easy to learn. But it must be learned if we would carry strong, healthy minds in our hodies. We must find consolation and compensation in ourselves for the ills of life, and then it will be easier to break ourselves of the wretched habit of always looking for a confidant.—Harper's Bazar.

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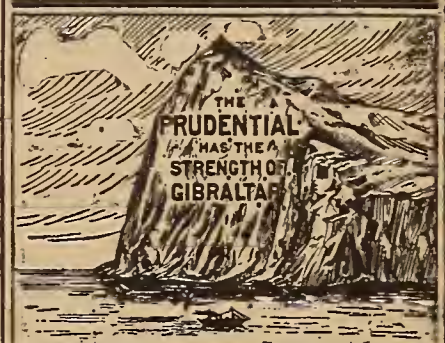
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## MISCELLANY

## BOILING WATER WITHOUT FIRE

It is possible to make a pail of water boil without putting it on the fire and without applying external heat to it in any way. In fact, you can make a pail of water boil by simply stirring it with a paddle.

The feat was recently performed in the physical laboratory of Johns Hopkins University, in Baltimore, Md., and any one may do it with trouble and perseverance. All you have to do is to place your water in a pail—it may be ice-water if necessary—and stir it with a wooden paddle. If you keep at it long enough it will certainly boil. Five hours of constant and rapid stirring are sufficient to perform the feat successfully.

The water will, after a time, grow warm, and then it grows hot—so hot, in fact, that you cannot hold your hand in it, and finally it will boil. Prof. Ames, of Johns Hopkins, annually illustrates some of the phenomena of heat by having one of his students perform the trick in front of his class. It is a tiresome job, but it is perfectly feasible.

The point which Prof. Ames wishes to illustrate is what is known as the mechanical equivalent to heat. It requires just as many foot-pounds of work to develop a given quantity of heat. By turning the paddle in the water at a regular speed it is possible to find out just how much work is required to raise the temperature of water one degree.

Heat is developed in almost any substance which is subject to continuous or very violent action. Long-continued and violent hammering on two pieces of wire will heat them to such an extent that they can be welded together. A lead bullet, if shot directly at a stone wall, will develop heat enough by the contact to melt and fall to the ground a molten mass.

## ROOSEVELT'S SLIPPERY WAY

Theodore Roosevelt at school was required to write essays, deliver orations and "speak pieces" just as are all school-boys in these modern days, and his old playmates still delight to relate how "Ted" brought down the house by his method of rendering that old stand-by, "Marco Bozzaris."

Everybody knows at least the beginning of the stirring poem:

At midnight, in his guarded tent,  
The Turk lay dreaming of the hour  
When Greece, her knees in supppliance bent,  
Should tremble at his power.

When young Roosevelt's turn came to speak, he arose with all his confidence, and began:

"At midnight, in his guarded tent,  
The Turk lay dreaming of the hour  
When Greece, her knees—"

Then his memory failed him, and he repeated:

"Greece, her knees—"

In vain his memory stubbornly refused to work. Once more he shouted, desperately:

"Greece, her knees—"

The old professor looked over his spectacles and encouragingly remarked:

"Grease her knees once more, Theodore; perhaps she'll go then."—Times-Herald.

## A CLOCK WITHOUT FIGURES

When you look at your watch and it reads 11:40 o'clock, do you notice the hours marked VIII. and VII., or do you only glance at the position of the hands on the dial and instantly understand what time it is? If all the arbitrary hour and minute hands were wiped out, couldn't you tell what time it is by the town clock?

The city of Detroit is deeply involved in the settlement of these points. A huge clock has been put in the tower of the fine new post-office building. Instead of the customary numerals a plain black band has been put on the dial, and gilded dots mark the fleeting hours.

A local inventor and mathematician devised it. He claims, and he is supported by Sir Edward Becket, the great clock and watch authority, that nobody but the very ignorant believe that people "tell the time" from the figures on the dial.

A tower-clock on the line of the Boston and Maine railway in New Hampshire has, instead of the usual numerals, the letters which go to make up the words "Memorial Gift."—The Manufacturing Jeweler.

## THE HUMAN OSTRICH

"TELL ME WHAT YOU EAT AND I'LL TELL YOU WHAT YOU ARE"

The human ostrich. You've seen him, probably, in the booth at the fair or circus or on the platform of the dime museum. He has toughened his stomach to the consistency of leather, and lunches on broken bottles, tacks or ten-penny nails with seeming impunity. He doesn't live long, of course, for he sacrifices life to earn a lazy livelihood.

You would be amazed, perhaps, to be told that you were something like the human ostrich, in the character of your diet, and the risk of life involved.

It is not necessary that you eat glass



and nails in order to resemble this monstrosity. The man who plays the part of the human ostrich is an example of depraved appetite in its most extreme and exaggerated form. The depraved appetite of the average candidate for dyspepsia does not go farther than hot bread and biscuit, rich pastries, highly seasoned dishes, and excessively greasy foods. Add to this improper cooking, haste in eating, and lack of proper rest after a meal, and you have a condition very likely to result in disease and suffering.

Let it be remembered that the sole object of food is nutrition; nutrition not for the body as a whole only, but nutrition for the varying needs of the separate parts of the body; for the muscles, the nerves, the brain, the blood. When the stomach is in a state of healthy activity, Nature, by her remarkable processes, takes the food you supply and distributes its starches and sugars, its salts and phosphates according to the needs of the separate organs of the body. When the stomach is not in a state of healthy activity, Nature does her best, but the various dependent organs of the body are put on short rations. There is not nourishment enough to supply them properly.

## WHAT HAPPENS THEN?

A weakened stomach. A stomach incapable of performing its functions fully. The liver and blood-making glands work imperfectly. The natural result is that the food is imperfectly digested and only partly assimilated, and the channels of life are choked and stopped by waste and putrescent matter. Some people know where the trouble is. They locate it in the stomach, because they have pain there after eating, an irregular craving for food, or an appetite that eating does not satisfy. There is heaviness after a meal, a feeling of undue fullness. It is hard to breathe, there is such a stuffy feeling about the chest. There may be palpitation or irregular action of the heart and the sufferer imagines he has heart disease. Perhaps the stomach sours, and there are bitter risings, and belchings. These symptoms mark various forms and stages of "weak stomach." They will not all be present in every case or in the earlier stages of the disease. Any one of these symptoms locates the trouble in the stomach and the digestive and nutritive functions, which are disturbed.

Quite often there is no apparent connection between the stomach and the symptoms of the disease. The victim thinks it "liver trouble," heart failure, or lung disease. There is a dull pain, perhaps in the back or the side. The spine aches, sometimes "in spots" and sometimes through its whole length. There may be a sharp stitch or pain occasionally. Exercise makes the limbs tremble and the heart beat violently. Perhaps to some of these symptoms there is added an obstinate, stubborn cough.

## WHAT IS THE MATTER NOW?

It is another case of weak stomach. But that is not where the pain is. Very likely

not. But that is where the trouble is. The stomach has not been able to properly feed the organs dependent upon it. They are starving, they are weak, and they show their weakness in the aches and pains that afflict the various parts of the body. What will set the stomach right? There is one remedy practically infallible in its results, and that one remedy is Dr. Pierce's Golden Medical Discovery. It cures because it is made to cure just the conditions of the stomach which give rise to disease.

By way of proof take the case of Rev. C. L. Mundell, of Pinegrove, Gallia Co., Ohio. He writes: "I suffered from a dreadful feeling and weakness, and in 1893 I lost my health altogether. I went to one of the best doctors in the state and he said I had heart, stomach, liver and kidney trouble. His treatment did me no good. I tried different kinds of patent medicines, but got worse all the time; was so weak that I could not walk any distance. If I walked up hill or a little fast it seemed as though my heart would jump out. I had almost given up all hope, and my money was all gone. Was scarcely able to make a living. Finally I saw an advertisement in one of the country papers that for twenty-one one-cent stamps Dr. Pierce would send one of his 'Common Sense Medical Advisers.' So I sent and got one and began to read concerning diseases like my own. After consulting the doctor himself, I purchased at my nearest drug-store a bottle of Dr. Pierce's Golden Medical Discovery, and a bottle of his 'Pleasant Pellets.' This was in 1897 and now I am happy to say that I am in the enjoyment of good health which I attribute to Dr. R. V. Pierce. I am so glad of my health that I cannot say too much. I first return my sincere thanks to Almighty God and then to Doctor Pierce."

The above is only a specimen case taken at random from thousands.

## WILL NOT INEBRIATE

"Golden Medical Discovery" contains no alcohol, or whisky, no opium or narcotics, neither sugar nor syrup which so often disagree with the weak dyspeptic stomach. Without any of these things it preserves its medicinal qualities perfectly and in any climate. It does not create a craving for injurious stimulants or narcotics.

## DON'T BE DECEIVED

If you are convinced that Dr. Pierce's Golden Medical Discovery is what you need, do not allow any designing dealer to palm off a substitute on you under the specious plea that it is "just as good." If he has no respect for your judgment show him that you have.

There are people everywhere who are in ill-health. Medicine has not helped them. They are out of heart and discouraged. Dr. Pierce invites such to write to him, freely and fully. After careful consideration of the ease a reply is quickly made containing such instructions and fatherly advice as will prove of the greatest benefit. There is no charge for this consultation by letter.

## A GREAT OFFER

"The People's Common Sense Medical Adviser," Dr. Pierce's great work on the treatment and cure of disease, is a book for patients, a book for the household. It is packed with information from cover to cover. This great book contains 1008 pages and over 700 illustrations, is sent absolutely free, on receipt of stamps to cover the expense of mailing only. Send 21 cents in one-cent stamps for the edition bound in paper, or 31 stamps for the handsome, cloth-bound edition. Address,

Dr. R. V. Pierce, Buffalo, N. Y.

## FIVE LITTLE CHICKENS

Said the first little chicken,  
With a queer little squirm,  
"Oh, I wish I could find  
A fat little worm!"  
Said the next little chicken,  
With an odd little shrug,  
"Oh, I wish I could find  
A fat little bug!"  
Said the third little chicken,  
With a sharp little squeal,  
"Oh, I wish I could find  
Some nice yellow meal!"  
Said the fourth little chicken,  
With a little sigh of grief,  
"Oh, I wish I could find  
A green little leaf!"  
Said the fifth little chicken,  
With a faint little moan,  
"Oh, I wish I could find  
A wee gravel stone!"  
"Now, see here," said the mother,  
From the green garden-patch,  
"If you want any breakfast  
You just come and scratch!"

FREE

We will send this Repeating Air-rifle Free for a Club of SIX yearly subscribers to Farm and Fireside at the Clubbing Prices. (See the shipping directions below.)

## A NEW REPEATING AIR-RIFLE

We here offer the new 1898 Globe Air-rifle, which has several important improvements, making it the best and most perfect Air-rifle ever invented.

## Description

The Rifle is made of excellent material. It is 35 inches long, with nickel-plated barrel. It has a globe sight and wooden stock. It is so simply and strongly made that a bright boy can quickly take it all apart, clean, and put together again. It is a very hard shooter. It will carry a bullet over 500 feet. It is easily and quickly loaded.

1 2 3

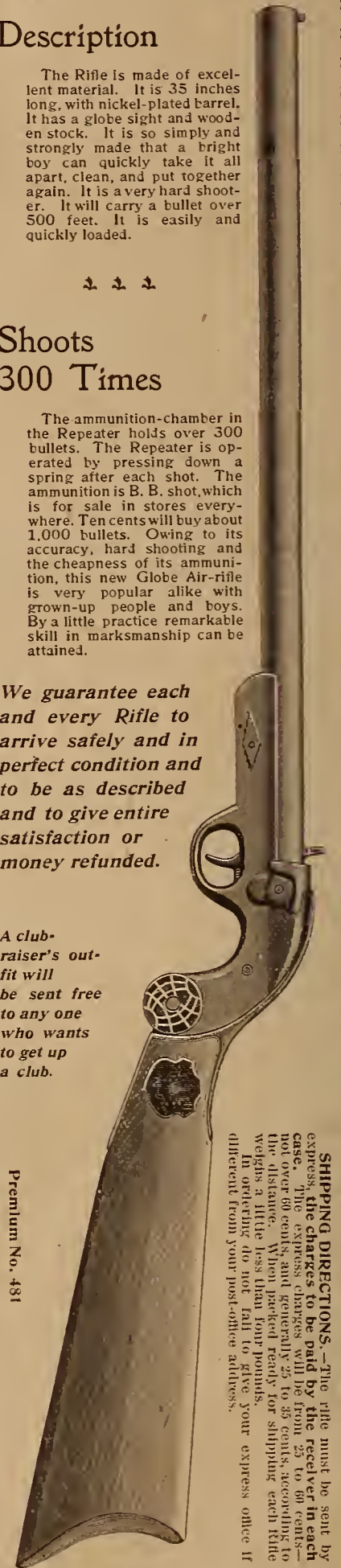
## Shoots 300 Times

The ammunition-chamber in the Repeater holds over 300 bullets. The Repeater is operated by pressing down a spring after each shot. The ammunition is B. B. shot, which is for sale in stores everywhere. Ten cents will buy about 1,000 bullets. Owing to its accuracy, hard shooting and the cheapness of its ammunition, this new Globe Air-rifle is very popular alike with grown-up people and boys. By a little practice remarkable skill in marksmanship can be attained.

We guarantee each and every Rifle to arrive safely and in perfect condition and to be as described and to give entire satisfaction or money refunded.

A club-raiser's outfit will be sent free to any one who wants to get up a club.

Premium No. 481



We will send Farm and Fireside One Year and this Air-rifle for \$1.50.

(When this offer is accepted the name may be counted in a club. See shipping directions above.)

FARM AND FIRESIDE,  
Springfield, Ohio

SHIPPING DIRECTIONS.—The rifle must be sent by express, the charges to be paid by the receiver in each case. The shipping charges will be from 25 to 60 cents, not over 60 cents, and generally 25 to 35 cents, according to the distance. When packed ready for shipping each rifle weighs a little less than four pounds. In ordering do not fail to give your express office if different from your post-office address.



# SMILES

## WHEN A FELLOW BEGINS TO GET BALD

As age creeps upon us we try to stay young  
And frisky as long as we can.  
And show to the world by both action and  
tongue

We are a mighty good man.  
We laugh at gray hairs as no token of age,  
But look in the mirror appalled  
As we find we are facing that worrying stage  
When a fellow begins to get bald.

It fastens a look of deep care in the eyes,  
It anchors a dread in the soul;  
For here is a feature we cannot disguise,  
A skating-rink up on the poll.  
The fiend of anxiety tortures the brain,  
Our taste for enjoyment is palled,  
Our pleasure is tinged with a color of pain  
When a fellow begins to get bald.

We blow in our money for tonics and creams,  
We try all the lotions in sight,  
But ev'ry preventive we plaster on seems  
To hasten the hair in its flight.  
We wear out our shoes on the specialist's  
stairs.

Experts into council are called,  
But every day adds to the burden of cares  
When a fellow begins to get bald.

Whenever we meet lady friends on the street  
We blush while uplifting our hat,  
And though they may smile us a greeting  
most sweet

We know they have got us down pat.  
We seem to care little when to our re-ward  
In the realms of the blest we are called,  
For half of the pleasure of living seems  
floored

When a fellow begins to get bald.  
—Denver Evening Post.

## A NEW THEORY

"I tried a new theory of mine on that last girl I had," said one Warren avenue matron to another, as they gossiped over the back fence. "After having had a dozen or so in rapid succession I made up my mind that I must lack tact, was too irritable, or did not make sufficient allowance for the annoyances encountered by every household servant. I determined to be more considerate and more diplomatic."

"Ob psbaw! I know them. But go ahead with your experience."

"I received that last one just as pleasantly as I would have received a favored guest. I went with her to her room, showed her where to put everything, had awnings put over the windows because she thought the heat and light a little too strong, placed a couple of extra shelves in the closet, fixed a nice place for her bicycle in the summer-kitchen, voluntarily offered her an extra night out each week, personally assisted her to get a run of things in the kitchen, and then praised her for everything that I could approve, without pretending to notice her mistakes or to miss the dishes she broke. My idea was to win her by kindness and continued assurance of appreciation. I am sure that every nature is susceptible to such treatment."

"Well, I'm not, by a good deal. But how did it come out?"

"At the end of the first month, convinced by my constant approval that she was about the best girl in the city, she demanded two dollars more per week, and the right to put her wheel in the front hall where the 'gentlemen' kept theirs, or she would leave. Of course, she left. Don't they just try your soul out?"—Detroit Free Press.

## A DESIRABLE COMPANION

Here is an advertisement that recently appeared in an English paper:

"A lady in delicate health wishes to meet with a useful companion. She must be domestic, musical, an early riser, amiable, of good appearance, and have some experience in nursing. A total abstainer preferred. Comfortable home. No salary."

A few days afterward the advertiser received by express a basket labeled: "This side up—with care—perishable." On opening it she found a tabby-cat, with a letter tied to its tail. It ran thus:

"Madam—In response to your advertisement, I am happy to furnish you with a very useful companion, which you will find exactly suited to your requirements. She is domestic, a good vocalist, an early riser, possesses an amiable disposition, and is considered handsome. She has great experience as a nurse, having brought up a large family. I need scarcely add that she is a total abstainer. A salary is no object to her; she will serve you faithfully in return for a comfortable home."

## THRIFTY

Old Squire Blank was the richest and the stingiest man in the town in which he lived. Nothing gave him such keen delight as to get something for nothing. One day he and several of his neighbors had been in conference with a manufacturer who contemplated establishing a mill in the town. The conference was held in the one store in the town, and at its close the manufacturer stepped up to a show-case containing some cigars and said, "Have a cigar, gentlemen." All of the men selected a cigar but Squire Blank. He did not smoke. Therefore he said, "Thank ye, sir, but I don't smoke; but as the seagars are a dime apiece, I'll take a dime's worth of mustard, if you say so."

Of course the astonished gentleman "said so," and the squire went home jubilant over "a hull half pound o' mustard that never cost me a red cent!"—Harper's Bazar.

## A STRAW

"I didn't know until yesterday that Bickerman was a candidate for office."

"Is he a candidate? This is the first I've heard of it."

"He must be. I saw him at the county treasurer's office paying his taxes, and he wasn't making any kind of a kick about it."—Cleveland Leader.

## CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East Indian missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 320 Powers' Block, Rochester, N. Y.

## HYPNOTISM TAUGHT BY MAIL

READER—You can become a Hypnotist and exert a magic influence over others by my Wonderful Hypnotic Discovery. It is by far the quickest and surest method yet discovered, and will positively enable you to Hypnotize quick as a flash. Think of the possibilities for pleasure and profit which this mysterious power will open up to you! Your own success in life will be assured by the possession of this power. You can control and direct the thoughts and acts of others. You can make happy homes by curing disease and correcting bad habits. You can entertain your friends by the hour with side-splitting exhibitions; in short, the Hypnotist's life is one of sublime usefulness to others and unbounded satisfaction to himself. I teach this wonderful art successfully by mail; in fact, **absolutely guarantee my pupils' success.** Elegantly illustrated treatise on the possibilities of this wonderful and mysterious art sent free on receipt of 2c. stamp for postage. Address, Prof. J. R. HERRIN, Ph.D., Box 301 Denver, Colo.

## HOME EMPLOYMENT for Men and Women

We have a large quantity of work to give out to families (occupying their whole time or leisure hours). We send it by mail and have it returned by mail. Any person can do this work and easily make from \$7 to \$10 per week. Write at once for full particulars and instructions.

NIAGARA ART SUPPLY CO., Buffalo, N. Y.

## DON'T BE HARD UP \$2400 A YEAR EASY.

Mr. Tussell made \$1500 first 6 months. Mr. Mauley, of Tex., \$1250 first two months. \$200 first month. Mr. Smith, of Colo., \$295 first month. Mrs. Howard, \$59.50 in one week. Mrs. Beard, \$400. Miss Nesne, \$205. Agents all making money, showing, selling and appointing agents for our patented Quaker Folding Bath Cabinet.

LET US START YOU. Any one willing to work, can make \$20 to \$40 a week easy. The Quaker is the greatest seller and money-maker for agents known. Just what every body needs. No more bath tubs or Dr. bills. Guaranteed best made. Lowest price. Wt., 5 lbs. Easily carried. We are reliable. Capital \$100,000. Largest Mfrs. Write us anyway for New Plan, Terms, Pamphlets, Testimonials, etc., FREE. O. WOULD MFG. CO., Cincinnati, O.

## INVESTMENTS

20 per cent. to 100 per cent. Per Annum.

An established Trading, Transportation and Mining Co., which owns both ocean and river vessels and is operating valuable gold mines in Alaska, and which has paid dividends the first year of its existence, offers to investors profit sharing bonds in amounts of \$5.00 each. 20 per cent. per annum may reasonably be expected on these bonds. For particulars address KLONDIKE PROMOTION CO., Dept. H, Dexter Bldg., Chicago, Ill., U.S.A.

## PIANOS AND ORGANS

Shipped direct from factory on 30 Days Free Trial. No money asked in advance. Conditions easy. A high-grade 3550 Kenwood Piano for \$155. A first class \$75 Kenwood Organ for \$32.50. Local agents must sell inferior instruments or charge double what we ask. We also have Pianos as low as \$125 and organs at \$21.75. Large illustrated catalogue sent FREE address in full, CASH BUYERS' UNION, 160 W. VanBuren St., B-7, Chicago, Ill.

## HOW TO MAKE MONEY.

We want one shrewd, careful man in every town to make a few thousand dollars for himself quietly at home and not work hard. Private instructions and valuable outfit of samples sent FREE. Address immediately, P. O. BOX 5308, BOSTON, MASS.

## GOOD SALARY

Made selling BEVERIDGE'S Sanitary Steam Cooker. Distills the water, purifies the cooking. No burning, no odor. Saves labor and fuel, fits any stove, and pays for itself. Agents, 2,885 sold in one town. Write (Box 963) Beverage Mfg. Co., BALTIMORE, MD.

## BEST PAY

A new line of Agency Work for either sex, easy and extra profitable; we give special advantages. Send for terms and Free Outfit.

MAST, CROWELL & KIRKPATRICK, SPRINGFIELD, OHIO.

## LADIES I Make Big Wages—At Home—

and want all to have the same one opportunity. It's VERY PLEASANT work and will easily pay \$18 weekly. This is no deception. I want no money and will gladly send full particulars to all sending 2c. stamp. Mrs. A. H. Wiggins, Box 49, Lawrence, Mich.

## SELL YOUR BRAINS

by getting a patent on that idea of yours. We can make you rich. Book and list of inventions free. We secure patents and sell them.

D. W. BRADFORD & CO., 88 Griswold St., Detroit, Mich.

## PROFIT IN THIS

Magic Lantern and Stereopticon Exhibitions pay well. Small capital needed. 256-page catalogue, descriptions and lowest prices of everything necessary, FREE.

McALLISTER, Mfg. Optician, 49 Nassau Street, New York.

## FREE TO INVALID LADIES.

A safe, simple home treatment that cured me after years of suffering with uterine troubles, displacements, leucorrhoea, etc., sent free to ladies with full instructions how to use it. Address MRS. L. HUDNUT, South Bend, Ind.

## 740

Silk Fringe Cards, Love, Transparent, Escort & Acquaintance Cards, LAUGHING CAMERA, Prize Puzzles, New Games, Magical Illusions &c. Finest Sample Book of CARDS. Biggest list of Visiting and Hidden Name Premiums. All for 2c. stamp. OHIO CARD CO., Cadiz, Ohio.

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Sample Styles of Silk Fringe Cards, Hidden Name Cards, Love Cards, Scrap Pictures, Games, Puzzles, Album Verses, The Star Puzzle, 13 Puzzle, and Agents Sample Album of our latest Cards. Send a 2c. stamp for postage. BANNER CARD CO., CADIZ, OHIO.

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## WRITERS WANTED

to do copying at home. Law College, Lima, O.

## Dr. Isaac Thompson's EYE WATER

For afflicted with SORE EYES

## ANY MONEY—GIVEN AWAY.

Send name and address and we will forward immediately 10 Ladies' or Gent's white neckties, 36 inches long. Sell them to friends at 10 cents each. NATIONAL SUPPLY CO. Dep. A. WILKES-BARRE, PA.

## FAT

HOW TO REDUCE IT. Miss M. Nobles, Racine, Wis., writes: "Your remedy reduced my weight 54 lbs. and I think it the simplest and grandest remedy in the world to reduce superfluous fat." It is purely vegetable and can be prepared at home at little expense. No starving. No sickness. Sample box and full particulars in plain envelope sent free to anyone. It costs you nothing to try it. HALL CHEM. CO., 8 BOX, St. Louis, Mo.

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Our agencies are worked on three different plans at agent's option. They pay exceptionally well. Some are particularly suited for work at odd times, or as side-lines. One of our specialties is making book-agents and others as much money as any other two in America. We furnish Outfits FREE that are good for a business of \$5 to \$8 per day. We furnish even our costliest Outfits so that they do not take one cent from the agent's pocket—only an hour's, or at most half a day's pleasant work among friends. Write quickly, as the season is on. Address Mast, Crowell & Kirkpatrick, Springfield, Ohio.

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ITS CAUSES, INCIDENTS, AND RESULTS. A reliable and exhaustive story of the war. Civil, Military, and Naval, from its beginning to the close. With many fine steel plates, maps, and choice engravings. By Hon. HENRY B. RUSSELL, assisted by SENATOR PROCTOR (Vt.) and SENATOR THURSTON (Neb.). One Agent cleared \$200.00 in first two weeks, another \$400.00 in three weeks. 1,000 more Agents want it. *Distance no hindrance.* for we *Pay Freight, Give Credit, Extra Terms, and Exclusive Territory.* Write for terms to the exclusive publishers. A. D. WORTHINGTON & CO., Hartford, Conn.

## LADY AGENTS

Desiring a permanently profitable business connection should write immediately for our latest offer. We furnish new material FREE, as needed, and to special ability we accord special rates. Ladies have made \$55 in 58 hours' canvassing. This is a great opportunity. Mast, Crowell & Kirkpatrick, Springfield, Ohio.

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RELIABLE MEN in every locality, local or traveling, to introduce a new discovery and keep our show cards tacked up on trees, fences and bridges throughout town and country; steady employment; commission or salary; \$65.00 PER MONTH AND EXPENSES not to exceed \$2.50 per day; money deposited in any bank at start if desired. Write for particulars. THE GLOBE MEDICAL ELECTRIC CO., Buffalo, New York.

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RECIPES for pain eradicators, liniments, salves. RECIPES for tobacco habit, veterinary remedies. ALL PATENTED and celebrated remedies 10c. per set, three sets 25c. THE JNO. M. HENDERSON CO., 925 F St., Washington, D. C.

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Instant relief; final cure in a few days. Never returns; no purge; no salve; no suppositories. Remedy mailed free. Address C. J. MASON, Box 519, NEW YORK, N. Y.

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## BED WETTING CURED. Box FREE.

Missouri Remedy Co., St. Louis, Mo.

On one occasion," remarked the veteran statesman and oldest representative in Congress, Galusha A. Grow, Congressman-at-large from Pennsylvania. "during the campaign previous to my coming to the House the last time I was riding along a road through one of the remoter valleys lying at the foot of the Blue Ridge mountains, when I came to a farmhouse which looked as if it might afford a luscious drink of cool water from a fine well in the yard. A tidy-looking woman, not especially handsome or of superior intelligence, responded to my appeal, and while I drank the cooling draught she talked to me.

"I presume there is no dearth of politics in your neighborhood at present?" I said, at a venture.

"Yes, my husband and the boys ain't talkin' much else these days."

"Doesn't it interest you?"

"No; I don't keer who gits elected so long as we can git along and keep out of debt, with a little to lay by for the children."

"That's good enough politics for anybody, madam," I said, with a bow which made her blush in embarrassment.

"It's the only kind I know, good or bad," she said, apologetically.

"Do you ever have any of the candidates up this way?"

"Not right here, but they come down to the store, half a mile across the valley."

"Do you ever see any of them?"

"Not this year, but I have other years."

"Why not this year? Are you losing your interest in the great statesmen of Pennsylvania?"

"No, not tbat," and she hesitated awkwardly, "but they say there's a Congressman-at-large this year, and I thought maybe it would be safer for me to stay pretty close around home till afterlection and they took him in."—Pittsburg Dispatch.

## THOUGHT HE WAS A MORMON

A Philadelphia exchange tells this story of the late President William H. Allen, of Girard college. On one occasion a business matter called Mr. Allen to a small town in the central part of the state. While sitting in the parlor of the country hotel in the evening, after transacting his business, he was taken in hand by the wife of the proprietor, who was extremely inquisitive and wanted to know all about his private affairs. Mr. Allen took it all in good part, and for a time was rather amused. Finally she asked, "Have you got much of a family?"

"Oh, yes," said he, and she smiled as his mind reverted to his hundreds of pupils.

"How many children?" she persisted.

"Well," said Mr. Allen, with great earnestness, "I have 500, and all boys!"

The good old lady was speechless for a moment. Then she arose, and hurrying to the door, called to her husband, "Oh, John! Come in here! We've got Brigham Young stoppin' with us!"

# SECRETS OF HORSE-TRAINING

By Prof. Oscar Gleason, America's King of Horse-trainers

**P**ROFESSOR GLEASON is renowned throughout America as the most expert and successful horse-trainer of the age. For breaking colts, conquering vicious horses and training horses he is a perfect wonder. His methods are simple and sensible, and can be put into use by any young man on the farm. To any one who has colts to break this book is worth a hundred times the price we ask for it. His book is used by the United States cavalry as the one great authority on horse-training.

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Gleason's Horse Book was first sold exclusively by agents at \$2.00 a copy. Knowing the great value of the book we bought the plates and have issued it in popular form. It contains every word and every illustration in the \$2.00 edition, but is printed on lighter paper and has a heavy, tough paper binding. We offer it at such a low price that every farmer and farmer's son in America should take advantage of this opportunity to possess a copy of this famous authority on horse-training.

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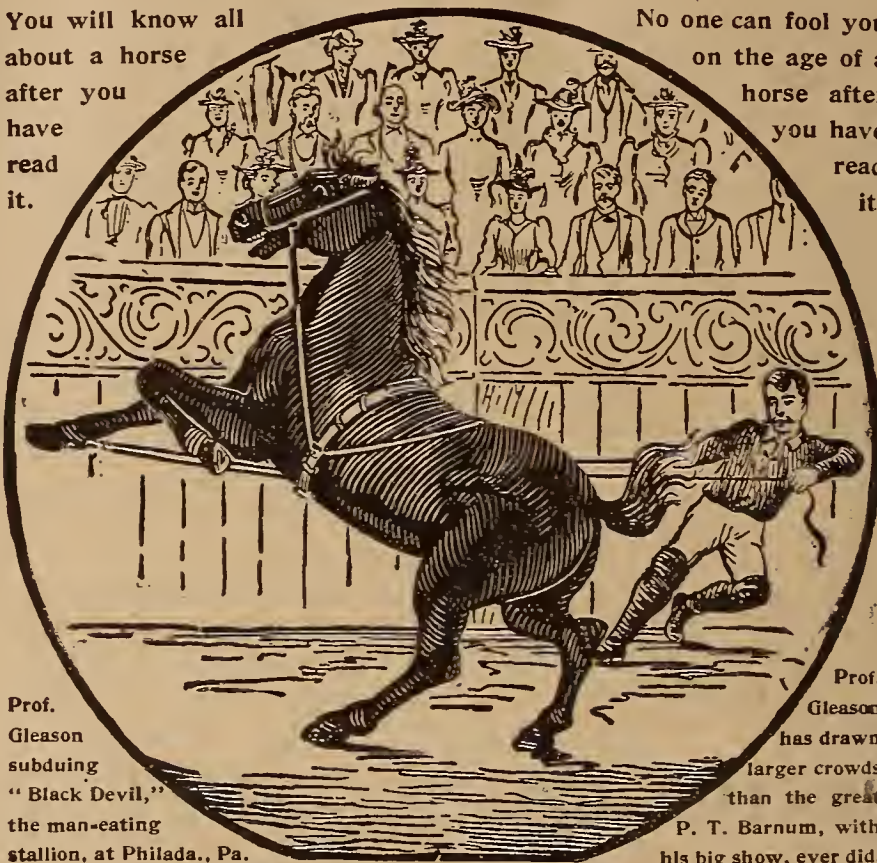
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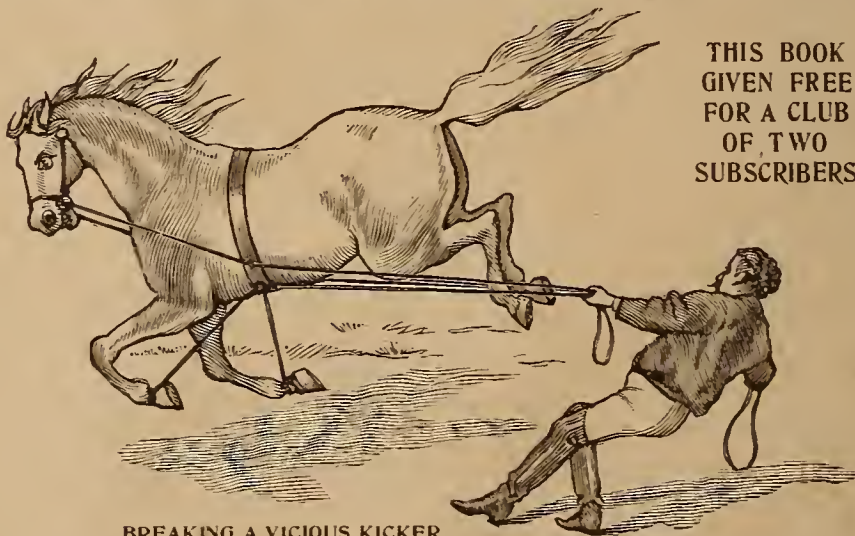
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## PARTIAL LIST OF THE PHOTOGRAPHIC VIEWS IN THE BOOK

### CUBAN SCENES

#### Bird's-eye View of the City of Havana

A view from the heights across the bay, showing water-front, shipping and a fine view of the city.

#### Morro Castle, the Old Fortress at Havana

Showing the massive stone architecture and frowning battlements of this once well-nigh impregnable fort.

#### Largest Sugar-plantation in Cuba

Showing Crushing-mills, Vats, Refinery, Storehouses, etc.

#### A Spanish Bull-fight in Havana

This picture was taken at a most exciting moment in this great sport of the Spanish people.

#### Magnificent Palace of the Captain-general

#### Typical Homes of Cuba's Poor

Showing great destitution, squalor and suffering.

#### Insurgents in a Forest Stronghold

#### The Intrenchments at Fort McCalla

Where Colonel Huntington's handful of marines made the first landing in Cuba and held their ground until reinforced.

#### Gallant Charge Up San Juan Hill

This was the bloodiest engagement of the entire war.

#### The Stars and Stripes at Santiago

Showing Uncle Sam's soldiers surrounding the City Hall while the flag of Spain comes down and the Star-spangled Banner goes up in its place.

### PORTO RICAN SCENES

#### Fine View of Cocconut Grove

Showing the fruit on the trees and the method of gathering it.

#### Camp of American Soldiers in Porto Rico

#### Bird's-eye View of City of Ponce

#### Spanish Barracks After Bombardment

This picture illustrates the inefficiency of massive masonry when assailed by American guns and gunners.

#### Strange Customs in San Juan Cemeteries

#### The Garrote-Spanish Execution

Old method of execution still in use in Spanish colonies.

### PHILIPPINE SCENES

#### Bird's-eye View of the City of Manila

A beautiful view of this city of a third of a million people, which has heretofore remained practically unknown.

#### Manila Harbor, Scene of Dewey's Victory

Showing the water-front of the city and the various fortifications which Dewey had to silence.

#### An Exciting Cock-fight

This is a very popular sport in the Philippines.

#### A Native Passenger-cab in Manila

Any American would prefer walking to riding in one of these wheelbarrow-like contrivances.

#### A Street Scene in the Philippines Capital

Showing the architecture, the vehicles, the dress and customs of the people, etc.

#### Methods of Punishing Prisoners in Public

#### A Rude Method of Plowing

#### The Draft-animals in the Philippines

A sort of buffalo-ox, used for hauling and plowing.

### HAWAIIAN SCENES

#### Raising the American Flag Over Hawaii

Taken at the moment the Stars and Stripes went up over the Executive Mansion in Honolulu, showing the immense crowds of soldiers, sailors and people of all classes. In the center of the picture are ex-President Dole and U. S. Consul Newell at the moment of formally declaring Hawaii annexed to Uncle Sam.

#### Gathering Sea-birds' Eggs by the Car-load

On the barren parts of the islands sea-birds lay their eggs in such numbers that railroads have been built to transport them for the manufacture of commercial albumen.

#### The Royal Palace at Honolulu

#### The Great Spreckles Sugar-plantation

#### Typical Country House of Native Hawaiian

#### The Island Home of Lepers

The island of Molokai is inhabited solely by lepers. A crowd of these creatures makes an interesting though pitiful sight.

#### Crater of the Immense Volcano Kilauea

On the Sandwich Islands, largest active volcano in the world.

### CAMP SCENES

#### Regimental Scenes at Various Camps

Showing the regiments at their various duties—drill, guard-mount, etc. These regimental pictures are from Camp Alger, Camp Thomas, Camp Wikoff—from San Francisco, Tampa, Key West and all camps of interest.

#### Soldiers Leaving Washington for the Front

#### Breaking Camp—Ready to Move

#### Various Barber-shops in Camp

#### Portable Blacksmith-shop in Cavalry Camp

#### Rough Rider in His Glory

#### Skirmish Drill in Front of Supposed Enemy

#### An Unexpected Roll-call

Showing how many of the boys were forced to appear without trousers, coats or hats.

#### Court-martial in Session

Showing the prisoner, the witnesses and officer at a court-martial trial under a tent in camp.

### NAVAL SCENES

#### The Wreck of the Maine in Havana Harbor

Showing the frightful havoc wrought by the explosion.

#### The Ships of the Blockading Squadron

#### Handling a Rapid-fire Gun During Action

One of the guns which hurled a perfect hail of missiles at Cervera's ships off Santiago.

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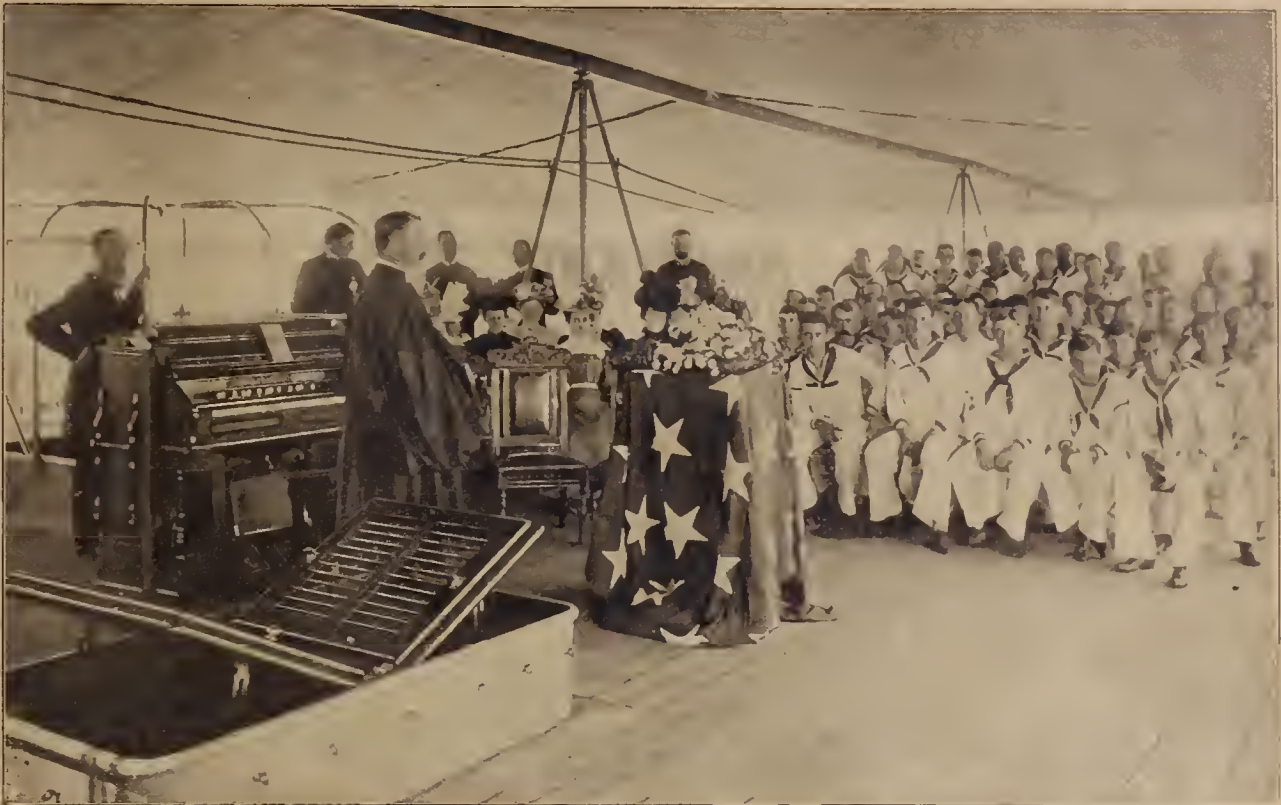
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"In the desert a fountain is springing."*

## TRANSFORMED BY IRRIGATION

THE early pioneer of Colorado was a seeker after gold, and when standing upon the eastern slope of the Rocky mountains, and looking eastward over vast barren-looking plains which he had crossed so laboriously, he little dreamed that the time would come when they would be teeming with farms, orchards and populous towns. Following him came the cattleman, who found these plains to be excellent pasture-lands, and he turned upon them vast herds of cattle, which increased and multiplied; and he quickly waxed rich, for he paid not a cent for the privilege of grazing his herds upon the public domain, and cattle were left to care for themselves after once being branded. Many of these cattlemen took up homesteads on the streams that flowed down out of the mountain range and through the plains. Many of the streams were bordered with bottom-lands, which were watered by spring floods and by the underflow from the beds of the streams. These men raised hay and vegetables, which they hauled to the mining-camps in the mountains and sold at almost fabulous prices. After awhile they dug irrigating-ditches in a small way, so that soon all the bottom-lands were under cultivation. Wheat was raised in considerable quantities, and ground into flour by means of primitive mills located on the streams and turned by water-power. The surplus output of flour was sold in mining-camps at high prices.

Still the great plains, comprising an area of nearly 50,000 square miles in extent, remained in their natural state. The spring rains covered them with grass and a profusion of low-stemmed wild flowers, bearing blossoms of rare beauty and rich colors. Experiments proved that the soil of the plains could be made productive by the aid of irrigation, and straightway the construction of extensive irrigation systems and the absorption of agricultural lands began; so that to-day there are more than 9,000 miles of main ditches in the state, and over 2,000,000 acres of land under cultivation. This development of agriculture has been made possible by the great annual snowfall in the mountains, which, melting under the influence of spring and summer sunshine, finds its escape through a large number of rivers and creeks, flowing eastward through the plains country. From these streams a great number of irrigating-ditches have been taken, so that each stream represents the main stem of a tree, and the ditches its branches. Under the combination of a fertile soil, a genial climate and the artificial application of water to the land, in addition to the natural rainfall, the whole face of the country has been changed.

There have sprung up among these cultivated lands numerous towns, villages and cities, which, enjoying the benefits of irrigation in common with the surrounding country, have put on an appearance of culture and beauty. In many of the towns the irrigating-ditches have been supplemented by systems of city waterworks, water from which is given free for the irrigation of flower-gardens, lawns and ornamental shrubberies. It is the medium-sized town, however, that presents the larger degree of this ornamentation. The smaller

towns, in many cases, lack that spirit of public pride which the larger towns possess, while the larger cities lack for both room and water supplies. Yet there is not a hamlet, however small or remote, but that presents some evidences of artistic taste in the way of tree-planting, provided there is a water supply of any kind.

The change is also observable throughout

its rapid growth, hardy nature and ample shade.

In towns having waterworks the lawns are principally watered through sprinklers, but a good lawn may be kept by irrigation provided the surface of the ground is made perfectly level and the lawn surrounded by a ridge of earth to prevent the water from running off before the ground has become

neglected, there was a nucleus furnished for an ultimate forestation of the streets. Sometimes a double row of trees was set out on each side of the street, one row on each side of the walk. This has been the means of producing some very fine arbors. In nearly every town on the Colorado plains the streets are at least one hundred feet wide. In some cases they are one hundred and forty feet wide. This tends to impart an appearance of barrenness to the street perspective, but of course does not affect the immediate shadiness of the street.

The use of fences and hedges is not general. Some very beautiful locust hedges are seen, but of late there has been a tendency to leave grounds without front or side inclosure. The towns have herd laws, but Colorado has no general herd law, the cattle interests having thus far been strong enough in the legislative halls to defeat such a measure. The towns, however, are not much troubled by range-stock, especially during the summer, as the feed on the ranges is good and there is but little incentive for stock to stray.

In the city, as in the country, the cottonwood predominates. Still, there are large numbers of white maples, box-elders, ash, elm, walnut, silver-maple, Lombardy poplar and honey-locust to be seen. The box-elder is gradually falling into disuse as a shade-tree in the cities, because it becomes badly infected with a moth that almost destroys its foliage. Both Lombardy poplars and catalpas show a disposition to decay, and are disappearing from the Colorado landscape.

Honey-locusts thrive fairly well, but need care until they acquire a large growth. Evergreens, such as the silver-spruce, fir and cedar, which can be obtained in any quantity for transplanting from the mountain gulches, are found in many lawns, but it requires special knowledge of their habits and great care to make them live and flourish. As for flowers and ornamental shrubbery, the same species are found in Colorado lawns and grounds as are found in eastern lawns. Roses flourish and are specially brilliant in color.

The Colorado rural landscape is particularly rich, both during the summer and autumn. The agricultural districts are checkered with fields of wheat, oats, corn, barley, potatoes and alfalfa. The last-named, a very luxurious and popular forage-plant, produces three and sometimes four crops of hay in a season, the yield to the acre being from four to six tons. While growing it is of a deep rich green, and shows in sharp contrast to other crops. When allowed to bloom the green of the leaves is tinged with the rich purple of the blossom, which throws off a world of rich fragrance, perfuming the adjoining country for miles around. Farm crops under proper cultivation yield most bountifully, wheat in some cases producing sixty bushels to the acre, oats seventy-five, and potatoes four hundred.

For vegetables and fruits, both large and small, Colorado is surpassed by no state in the same zone. Strawberries, blackberries, raspberries, gooseberries, currants, plums, apples and cherries grow in great profusion, and are of a peculiarly fine quality as regards size, soundness and flavor. In the vegetable line the gardens of Colorado produce almost beyond belief. Onions eighteen tons to the acre, cabbage ten tons, tomatoes thirty tons, beets and carrots seventy-five tons, are some of the large figures given by experienced and truthful gardeners.

H. A. CRAFTS.



A COLORADO HARVEST-FIELD

the agricultural districts. The highways and country lanes are bordered by shade-trees, and the residences are surrounded by trees, shrubbery and well-kept lawns. Orchards are numerous and constantly increasing in size and number, as the feasibility of fruit-growing in Colorado was long since demonstrated. The farmers have not only set out

thoroughly saturated. Sloping lawns watered by irrigation are in danger of being badly washed, and the grass growing in shreds and patches. Lawns that have any considerable slope are best watered by a lawn-sprinkler with a fine spray. To keep a lawn in good condition requires constant care, in consequence of the large proportion of sunshine



A CORNER RESIDENCE, FORT COLLINS, COLORADO

trees along the highways and the thoroughfares, but also along the banks of the main ditches and laterals, not only to improve the appearance of the landscape, but to preserve the banks of the ditches. For the latter use willows are employed to a large extent. While we see maples, ash, elm, catalpas, etc., along the roadsides, the predominating tree is the native cottonwood, by reason of

to cloudy weather, a penetrating sun and a light, dry atmosphere.

In street shading the towns, as a general thing, have taken a lively interest. In the laying out of many towns the initial step after the streets had been surveyed was the planting of shade-trees. This was done largely to facilitate the sale of lots, and while the trees, in a large proportion of cases, were

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In an after-dinner speech before the Merchants' Club of Chicago Mr. William E. Curtis recently said:

"Those who boast of our splendid isolation and declaim against the addition of territory as un-American forget we are great by conquest, that every inch of our national domain was bought or fought for.

"The same arguments that are advanced by Senator Hoar and Mr. Schurz against the retention of the Philippines might have been used with equal force to head off the pilgrims at Delft-Haven. They could have been applied to every cabin that was erected on the frontier. I hazard a prediction that the president will recommend a broad, liberal colonial policy that will set an example to other nations, and give the inhabitants of the captured provinces a better government than they could give themselves. It is not proposed to incorporate them into our system of states, nor make them territories, but to give them home rule as far and as rapidly as their conditions will permit, under the protection and supervision of this government."

It is an idle fear that the United States will make states of the Philippines or hold the Filipinos as serfs under military force. The imperialism of the New America means simply the freedom of some twelve millions of people from Spanish misrule and oppression; and expansion, the expansion of opportunity for them to advance in civilization.

In a recent interview with a Washington press correspondent the director of the United States mint, George E. Roberts, said:

"In 1897 the world produced in gold \$237,000,000. For 1898 the output will reach \$275,000,000. This is an increase of about 275 per cent over the production of 1890, when \$118,000,000 was wrung from the soil. Of this tremendous production, in round numbers something over 500 tons, South Africa easily leads with approximately \$75,000,000; Australia following with \$65,000,000; the United States, \$60,000,000; Russia \$50,000,000, and the remaining \$45,000,000 distributed among the other nations of the earth. In all probability the aggregate for 1899 will

measure up to \$300,000,000, and so far as human judgment is capable of discernment this increase annually, at a fair ratio, will continue for many years—at least during this generation."

After much speculation and wild exaggeration about the production of gold in the Klondike it is interesting to get some exact figures. Of the Klondike output for 1898 Director Roberts reports that already \$5,070,000 has been handled by the assay office at Seattle, and \$4,985,000 deposited for coinage at the San Francisco mint; and he estimates that probably \$2,000,000 more will be turned in, making a total of about \$12,000,000 for the whole year.

In a recent speech before the New York Chamber of Commerce General Miles said:

"Twelve millions of people that a year ago were suffering under the oppression of tyranny and cruelty are to-day under our protection. Gentlemen, what are you going to do with these? Are you going to turn them back again? [Cries of "No! No!"] It would be a crime of the nineteenth century to do it. If you cannot give them liberty in their own country, if you cannot establish government for them, you can at least protect them until such time as they shall be prepared for self-government; and if they do not care to come and be part of this country you can see to it that they have a liberal and a free government, such as you enjoy yourselves. I am not talking about expansion nor about any political question. I am simply stating what the army and the navy have achieved. They have given freedom to 12,000,000 people, and I am very sure that 80,000,000 Americans will not desert them.

"Another result that I rejoice in is this: That outside of any treaty, outside of any great work that diplomatists and statesmen and commissioners may accomplish, there is a bond of friendship. There is a sympathy and a respect between the people of Great Britain and the United States. [Applause.] It may not require a treaty to bind us more strongly together than we are now, but there is a cordial friendship and a profound respect between the people of the United States and the people of Great Britain that I trust will grow stronger and stronger, and its influence, as has been said here to-night by the distinguished Lord Herschel, will be not only beneficial to the people of Great Britain and the United States, but it will be beneficial to the people of the whole world."

In a recent after-dinner speech before the Baptist Social Union of New York General Stewart L. Woodford, late minister to Spain, said:

"Victory has brought us face to face with strange problems at the doorway of an unknown future. Porto Rico is ours by right of conquest, and by that higher right, the assent of its people. Cuba is temporarily ours by right of conquest, by surrender of the Spanish government. We hold it under the most solemn pledges that a nation could give, to retain it so long only as is necessary to establish a permanent and free government. But to be frank, I fear under those conditions we shall stay in Cuba very much longer than Congress or the people dreamed when war was declared. Out of the past thirty years, for fourteen the island has been in revolt. The native Spaniards are too numerous, too wealthy, have too much power of superior education, to be overcome by the insurgents. But they are, in turn, too weak to overcome them. Differences of race and other difficulties due to four centuries of Spanish rule are great, and to establish a stable government I fear we shall have to stay till enough Americans, Germans and people of other nationalities capable of self-government go there to make any government stable.

"Our flag is in Manila bay. Every tradition of the American people is against an American colonial policy, against what we miscall imperialism. But at the same time God or evolution, history or fate, has carried our flag seven thousand miles across the sea, and has given to the Filipinos the dream of freedom from Spanish rule. For us to turn them back to Spanish rule would be a sin against God and a shame to the nation. How we are to solve these questions I know not. If in the lust of conquest we undertake the problem, we shall fail; if from greed of power, we shall fail. But if regretfully we accept the responsibility and bring our highest courage to our highest fate, the same Providence that gave victory to Dewey will give victory to our high purposes, and the result will be a blessing not only to this people, but to the civilization of the world."

MR. BRANSHAW, a Texas subscriber, writes: "I ask the privilege of saying to the readers of your paper that the New York 'Journal of Commerce' has been led far from the truth in regard to the effects

of low-priced cotton, as set forth in the November 1st number of the FARM AND FIRESIDE.

"As to the first proposition I have nothing to say. The second, 'that the cost of raising the staple has been materially lessened,' is untrue. It is agreed that, in some instances, the cost has been slightly reduced, but until some Edison invents a successful cotton

chopper and picker the greatest expense must remain the same, or the laborer must continue to work for unreasonably low wages. The third is either altogether untrue or says, in substance, that labor is paid only half what it should be paid; for ten years ago labor was certainly paid little enough—about seventy-five cents for twelve hours' hard work. As to the fourth, 'that five-cent cotton will, as a rule, leave a moderate profit to the grower,' it is false. Obviously so, when one considers that the average crop is two hundred and fifty pounds to the acre, and ten acres to the hand, which would give \$125 for about nine months' work, or forty-five cents a day. The sixth and seventh propositions are absolutely false when applied as a whole, with the exception of that part of the latter reading 'the mercantile interest will receive its share.' As to the remainder of the 'Journal's' article I will say that no intelligent farmer can read it without justly pronouncing a benediction which would not be proper at church."

The statements to which these vigorous exceptions are taken did not originate with the "Journal of Commerce." In substance, they were made by men of various business centers of the South in letters to that paper, answering a request to furnish information. Evidently there is a wide difference of opinion in the South on this subject. In what the "Journal" said about the evils of the one-crop and credit systems it is fully sustained by contributors to the Southern press.

The "Texas Farm and Ranch," November 12th, contains an article entitled "The Crop of the Slave," which reads, in part, as follows:

"One of the most potent factors for evil in Texas is the credit system. It gives uncertainty to all business, and makes the most conservative plans and calculations merely fitting and delusive images of fancy. It sweeps away in a single season the accumulations of years of toil and self-sacrifice without any fault on the part of the loser save devotion to his business. It adds largely to the maintenance cost of the farmer without increasing the profit of the merchant. . . . The tenant borrows from the landlord; the landlord from the merchant; the merchant from the banker, who in turn discounts the paper in the East. The banker bases the transaction upon the prospective cotton crop; the merchant stipulates for cotton in his crop mortgage; the landlord in

his lease contract provides that the tenant shall grow little else than cotton. In that brief statement, which epitomizes the industrial situation from the Gulf to the Rio Grande, there is a full explanation of all the woes of the Texas farmer. He is, indeed, a slave who cannot choose his own occupation.

"The cotton industry is the author of the credit system as we have it. Neither could exist without the other. Both are widely at variance with correct methods of economy and finance. . . . The system contemplates eight months of borrowing upon expectancy and four months of liquidation. At the best it puts eight mouths of losing business against four mouths of profit for all commercial enterprises. The merchant attempts to provide against possible losses by marking up the prices of his goods. The cotton-grower, whether a tenant or a land-owner, pays from twenty to twenty-five per cent extra for his supplies because of the hazard connected with the credit extended him. Experience has proved that the system is ruinous to both buyer and seller. The margin for loss is large enough to oppress one, but not sufficient to protect the other.

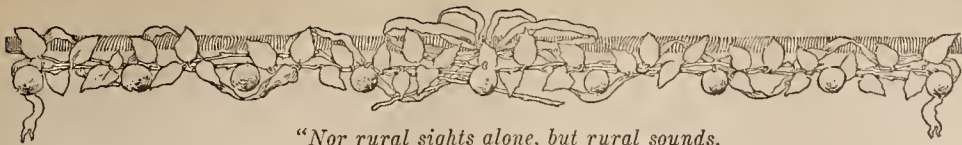
"In every age and with all peoples agriculture has been prosperous only when based upon the principles of self-maintenance and the sale of surplusage. Enough is disclosed in Holy Writ of the methods of Abraham and his immediate successors, who were mostly stock-farmers, to show that they thoroughly understood and followed that system. Had it been otherwise we may be sure they would have needed the crop mortgage and courts of bankruptcy in that early age. Solomon, in looking about for beings that were 'exceeding wise,' selected the ant, the cony, the locust and the spider for his illustrations—the ants because they 'are a people not strong, yet they prepare their meat in the summer.' What would Solomon have said of folks who depend upon the production and sale of four-cent cotton for the means to cancel crop mortgages and also to buy meat in winter?"

"The credit system and the crop mortgage shut out the farmer from the opportunity to achieve independence, because they concentrate his attention on a single crop, and that unremunerative. Let the reader look around and observe how small is the number of farms which export more than they import. Cotton at four cents cannot buy what is needed to grow it. The purchasing power of an acre of cotton is not sufficient to equip the brawn and muscle necessary to cultivate and gather it. That all-important fact ought to be emblazoned on every school blackboard in the country. Surely, if the people could realize its import they would not put their time and labor in pawn without hope of recompense."

THE general result of the movement of prices in October and preceding periods is approximately summed up by "Bradstreet's," as follows:

"BRADSTREET'S" PRICES INDEX NUMBERS			
October 1, 1890	105,996	July 1, 1896	65,952
January 1, 1891	94,236	October 1, 1896	56,803
April 1, 1891	96,900	January 1, 1897	60,364
July 1, 1891	91,633	April 1, 1897	68,760
October 1, 1891	88,826	May 1, 1897	68,063
January 1, 1892	87,782	June 1, 1897	66,648
April 1, 1892	86,676	July 1, 1897	66,937
July 1, 1892	80,629	August 1, 1897	69,217
October 1, 1892	82,889	September 1, 1897	71,937
January 1, 1893	85,217	October 1, 1897	73,277
April 1, 1893	95,995	November 1, 1897	73,265
July 1, 1893	79,369	December 1, 1897	73,527
October 1, 1893	78,617	January 1, 1898	74,184
January 1, 1894	75,991	February 1, 1898	74,196
April 1, 1894	73,190	March 1, 1898	75,243
July 1, 1894	72,270	April 1, 1898	73,586
October 1, 1894	72,306	May 1, 1898	74,066
January 1, 1895	75,570	June 1, 1898	74,885
April 1, 1895	66,872	July 1, 1898	75,570
July 1, 1895	71,304	August 1, 1898	76,556
October 1, 1895	72,941	September 1, 1898	76,843
January 1, 1896	70,576	October 1, 1898	76,562
April 1, 1896	66,191	November 1, 1898	76,940

"The index number reported on November 1, 1898, as will be seen from the above table, was 76,940, as compared with 76,562 on October 1st of this year and 73,275 on November 1st one year ago, and is the highest point reached since October 1, 1893, five years ago. The steadiness of the rise in the course of prices since more than one year ago is especially notable in this connection, and if the slight reaction shown in the summer of 1897 is excepted, there will be seen to have been a steady rise since October, 1896, two years ago."



*"Nor rural sights alone, but rural sounds,  
Exhilarate the spirit, and restore  
The tone of languid nature."*

## ABOUT RURAL AFFAIRS

### Pruning Principles

In many sections of this and other states where the native sweet chestnut abounds it used to be a common practice in cutting down the woods to leave trees bearing especially fine or large nuts standing, and thus we find lone trees in pasture-lots and cultivated fields to provide welcome shade to stock and to the tired soil-tiller, besides a profitable harvest of nuts almost every year. The nuts were and are yet picked off the ground after every high wind in October, or sometimes shaken off the limbs or knocked off with long poles in the same fashion as we used to shake and knock off the English (or Persian) walnuts from the trees in Germany. The following paragraph I quote from the October number of the "Canadian Horticulturist":

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"When black currants hang ripe on the bushes of an English garden of which we have read, the berry-laden branches are cut off and carried away to be stripped of their fruit in the cool shade. A comfortable way on a hot day, and a beneficial operation for the bushes, too, which thus severely pruned give a plentiful crop next season. This may serve to illustrate the rationale of the old English fashion of knocking the walnuts from the trees by beating with long poles the ends of the branches (on which alone the fruit is produced) and breaking many of them off. The broken ends would then be stripped of their nuts, and the boughs, thus 'shortened in,' throw out more bearing spurs, increasing the tree's future fruitfulness. So it was 'Merrie England' that gave rise to the not very chivalrous couplet:

"A woman, a spaniel and a walnut-tree,  
The more you beat them the better they be."

"Walnut-beating, however, is nowadays as much in disrepute as wife-beating, the former practice, though right in theory, being too rough and violent in execution."

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The Persian walnut-tree (many of my readers may be unacquainted with the fact) is a rather straggling grower. The same may be said of some early varieties of peaches, of the Burbank plum, the King apple, and of various other trees and bush fruits. A judicious shortening in wherever the wood growth seems excessive must result in giving us a more compact and generally better form of the tree, and likewise better fruit. Early-peach trees may be cut back even more severely for the sake of thinning the fruit and of bringing it nearer to the center of the tree. These light surgical operations may be performed at any time, using a knife or some suitable pruning-shears. Where the spurs and small shoots are rather numerous and closely together in the center of the tree the removal of a portion of them, or even all, may be necessary. The habit of growth of the Northern Spy apple and other trees is such that this cutting out of young shoots cannot well be avoided. Cherry-trees, on the other hand, seldom need pruning of any kind. Severe cutting is usually required for bush fruits, especially gooseberry and currant bushes. The removal of entire berry-laden branches even may do no harm. The harvesting of the fruit on neglected gooseberry-bushes, especially on the spiny Columbus, is a very unpleasant task. The bush after pruning should be open so that one can reach the under side of every branch without coming in contact with adjoining branches. Severe pruning of this kind has a good effect on the fruit. It makes it larger and better flavored. The currant-bushes as usually found (namely, neglected and left without pruning) bear short and scattering branches and small berries. Now cut the canes down to from four to six in number, and cut off all side branches to short stubs, and at next fruiting season you will have every cane a string of perfect bunches, and the individual berries of largest size. Take it all in all, you will have to exercise good judgment and common sense in the work of pruning the various trees and other fruits, varying your methods according to individual habit of growth.

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### An Excellent Weed-killer

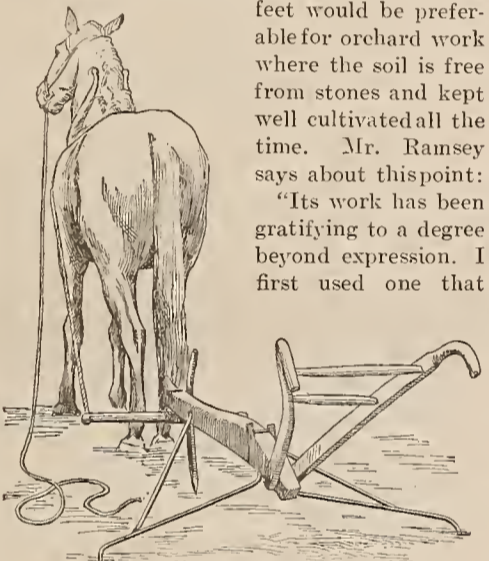
For nearly ten years I have been using a weed-killer built on the same principles as the one here illustrated, which I find described in "Texas Farm and Ranch"

under the name of "Ramsey's Plow." Mr. F. T. Ramsey, the inventor, says:

"The plow is made by taking a bar of steel one fourth of an inch thick, three inches wide and nearly ten feet long. Nearly five feet in the middle is drawn down to a sharp edge, which gives a straight blade of four feet and six inches. Then the steel is bent into the shape shown in the illustration, and clamped onto any simple beam with a bolt below and one above it. Braces are bolted on from near the ends up toward the front ends of the beam. There is a piece of three-quarter water-pipe curved back at the lower end, clamped onto the front end of the beam, which makes it run easier; in fact, it will run without any hand on it.

"A rod with head countersunk runs from the back edge of the blade near the center, through the steel on one side of the beam, with a nut on upper end, which prevents the blade from springing down in the middle. Set the plow as far back on beam as possible, and give it ten or fifteen degrees pitch."

In my own case the steel bar is clamped on the frame of an old-fashioned thill-cultivator, and the combination was the idea of Mr. E. A. Long. I have used it mostly to keep the weeds down in the dirt driveways on the place. As long as the soil is not packed too hard it works to perfection. Mine has a width of only three feet, but I am inclined to think that a width of five



AN EXCELLENT WEED-KILLER

feet would be preferable for orchard work where the soil is free from stones and kept well cultivated all the time. Mr. Ramsey says about this point: "Its work has been gratifying to a degree beyond expression. I first used one that cut four feet, but now use one that cuts five feet; and as I never let the ground get hard and baked one horse pulls it two or three inches deep, though in killing weeds on land already broken, and in pulverizing land for nursery stock, I work two horses to it, and when necessary throw a cushion on it and have a man ride it, resting his feet on the braces. It leaves the land perfectly level, and leaves no hard streaks by which moisture can escape. In a young orchard this plow annihilates every weed, and in large trees it reaches further under than any other plow. When I was growing up the thought of plowing the orchard drove away all bappiness, and the bark that was rubbed off drove away my father's happiness. A boy can run this, and the singletree never touches a tree. It commends itself to the lazy man, because the job doesn't last long and is easy; and it commends itself to the pushing, industrious man, because he can kill every weed in his orchard in a few hours and get at other work. I am not going to patent it, and every man who has an orchard may have his blacksmith make him one. I cultivated my orchard during last two winters, and have had immense crops of plums in spite of late frosts. My neighbors, in nearly all cases, have had poor crops, so I can claim something more than theory to back my statements."

I am willing to indorse all that Mr. Ramsey says in favor of this implement, and although I have not thought far enough to enlarge the width of my knife to five feet and use it as an orchard-cultivator, I am sure that it will do most excellently for that purpose. Of course, the principle of this plow is not patentable any more. I published description and illustration of this tool six or eight years ago in "Popular Gardening," and the idea has become public property. All who may wish to can have their blacksmith attach a weed-cutting knife as described to some cultivator-frame or plow-beam, the latter probably being the better.

T. GREINER.

## SALIENT FARM NOTES

### Cribbing Corn

One problem that farmers throughout most of the western states will have to wrestle with this season is how they shall so crib their corn that it will keep. Owing to late planting in the spring, late growth in the fall and the floods of rain that have fallen during the past two months there are thousands on thousands of bushels in which the cob is so full of sap or water-soaked that the grain is certain to spoil if the crop be cribbed in the usual way; that is, in cribs ten to twelve feet square. I have talked with many farmers about the matter, and while some seem undecided about what is the best course to pursue, others have adopted various plans and devices which they seem to think will work to perfection and prevent any damage from heating.

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One farmer has put in a number of ventilators, some square, others triangular, made of common fencing. These are set upright, about three feet apart, along the center of his crib, which is nine feet wide by forty-eight feet long. These ventilators extend from within three feet of the floor to the top of the corn in the crib, and have inch holes bored through their sides eight inches apart. Such ventilators as these, he tells me, have prevented his corn from heating several different times when the cob was even wetter than it is this season.

Another man has adopted substantially the same device, only on a cheaper scale. His ventilators are placed about the same as the other man's, but they are made of rails, four in a bunch. He claims that they are quite as effective as those of board, and do not cost half so much. Another, a tenant, is using small bundles of willow poles, while still another is using common drain-tiles set one above another, with a narrow strip of board run through them to hold them together. The prime object of these devices is to permit the free escape of heat and moisture.

Another farmer declares that he has never had corn to heat when placed in cribs eight feet or less in width, and he is well satisfied that any corn that has reached maturity will keep all right in a seven-foot crib, if it has a good roof over it.

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Many farmers, especially tenant-farmers, are obliged to build cribs of the cheapest materials obtainable, and very generally they resort to rails and make the cribs about ten feet square. In such cases I think it is advisable to put a ventilator made of boards or a bundle of five or six rails in the center, even if the corn is fairly dry. Unless the farmer is financially able to build good cribs and put rain-proof roofs over them, I would advise him to sell as he husks, or immediately afterward, if the cobs in his corn are the least sappy. The expense of cribbing in such cribs as will keep the corn in perfect condition such a season as this, and the possible loss through heating will much more than offset the increased price likely to be obtained by holding until next summer. This is the first time I ever advised farmers to sell their corn early, and I want it understood that even now this advice applies only to those whose corn, together with the cob, is not fairly dry.

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### Seed-corn

And now as to corn for seed. I am of the opinion that the man who does not select and thoroughly dry his seed-corn this season will bitterly regret it next summer. It is an easy task to go into a crib now and pick out a few bushels of corn for seed and put it in the house where it will dry nicely. To be sure, it should have been done sooner, but it is better to do it now than to neglect it entirely.

Only a few days ago I asked a fairly intelligent farmer if he had his seed-corn for next year saved. He said no. I told him that he had better be about it if he wished to avoid trouble next spring.

"Oh," said he, "I'm not worrying about it. I never had any trouble with seed-corn, and I always pick it out of the crib in the spring."

I know it to be a fact that his stand of corn did not average two stalks to the hill two seasons, and only a fraction over one another season, because of defective seed. I know a neighbor of his who is very particular about his seed-corn, and picks it out as he husks, whose stand the same season averaged three and one half stalks to the hill. If there ever was a season when it would pay to give seed-corn extra care it is this; and those who do it now, late as it is, will be glad next summer.

### Protecting Trees Against Rabbits

How many thousands of apple-trees will be girdled and ruined by rabbits and mice this winter just through lack of a few simple precautions? One may not see many rabbits now, but wait till snow falls, and you can see the tracks made in a single night. You will then almost be ready to exclaim, as did a neighbor of mine, "There's a million to the acre!" For many years I have protected my trees with strips of lath two feet long and woven together with broom-wire; but last year I wrapped a number of trees with common newspaper, tying them on with strong twine, and they proved to be quite as efficacious as lath. This fall I wrapped all that were unprotected with papers, and as it is so easily done I shall use no more lath. I have the papers opened out and laid one by each tree, then commencing close to the ground I wind spirally up to the branches, and tie at the top, at the bottom and in the middle. This holds them securely all winter, and in the spring, when all danger is past, I pass along the rows with a sharp knife and merely cut the strings. The paper will come off of itself before midsummer.

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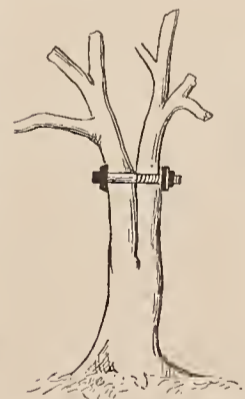
For several winters I have made it a practice whenever we have a fall of snow to take my pruning-shears and trim off a few branches here and there throughout the orchard, leaving them to lie where they fall. Rabbits that are hungry for apple-bark always feed off these prunings and let the trees alone. It is very little trouble to trim off a few useless branches occasionally, and very likely it may save a tree or two. One winter the snow drifted in against one row of trees until it was up among the branches and I very much feared serious damage, but by keeping a liberal supply of fresh prunings scattered along the drift I saved them from injury. The rabbits took a great part of the bark off the prunings and let the trees alone. A half-dozen rabbit-traps do excellent service in an orchard. One can reduce the rabbit crops faster with a few common fence-board rabbit-traps than he can by tramping about with a gun or keeping three or four dogs.

FRED GRUNDY.

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### SAVING SPLIT TREES

During heavy wind-storms valuable trees are liable to be broken down or split. Trees of spreading habit should never be allowed to branch into two equally balanced sides, as splitting at some time or other in the life of the tree is almost sure to occur. In case of splitting, however, if the tree is in full vigor, it pays to go to some trouble to save it. By using the method of bolting the two parts together, as shown in the illustration, the tree cannot only be saved, but no injury will result, nor will growth or fruiting be interfered with. The writer last year had a valuable York Imperial apple-tree split in this manner while the limbs were hanging moderately full of fruit. The halves were drawn well together by means of ropes through the heavy limbs above the crotch; a hole was then bored through the center of the trunk at the crotch, and a large bolt inserted. A large iron washer was used at



either end. The nut was then placed on the bolt and the halves drawn close, the rope being again used to avoid stripping the thread on the bolt. The ropes were removed and the trunk was more secure against wind than originally, the large washers keeping the bolt-ends from sinking into the wood. Finally, a wax composed of one third rosin, one third beeswax and one third tallow, melted together, was smeared all over the crack and in the crotch. The crop of apples matured as fully as those of the surrounding trees, and no difference has since been noticed in its growth. This year bark formed over the crack, pushing away the wax. The iron bolt through the tree will not in any way injure it.

GUY E. MITCHELL.

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**PRESERVATIVES.**—The majority of commercial preservatives are made up of one or more of the following drugs: Borax, boracic acid, sodium salicylate, salicylic acid and formalin. As a rule, any preservative or coloring matter used in milk without giving due notice to the purchaser must be considered as a fraudulent adulteration.—Alabama Experiment Station, Bulletin No. 97.

## OUR FARM

## FARM THEORY AND PRACTICE

**SELECTING A FARM.**—A young man who has been engaged in farming for eight years, having been in partnership with his brother on the old home farm, now has sufficient money to buy a fair-sized farm and stock it reasonably well. He can buy rolling land of fair quality for from \$30 to \$35 an acre, and there is one farm for sale that lies convenient to the railroad station, but the most of this farm is quite flat and too wet for grain. The soil is black and naturally much richer than the rolling land of that section. Drain-tile has not been used in that locality, and neighbors have little faith in its ability to dry land in a practical way. This young man writes asking whether he should buy a farm that is naturally dry but not nearly so rich as this wet land, or should he risk his money in the flat farm, trusting to drain-tile to give him a soil dry enough for wheat and corn. While a private reply was made to the inquiries, the questions that arise in selecting a farm have interest to us even when we know each man must answer the most of them for himself.

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**UNDERDRAINAGE EFFECTIVE.**—There are large areas of farming lands in this country in which land-owners have no practical knowledge of the effects of tile-drainage. These areas, unlike the flat lands of the north-central states, that require so much underdrainage to bring them into a state of cultivation, comprise much rolling land, but in the valleys may be found wet land that needs tiling badly. There are no factories near at hand, and the farmers have no thought that underdrainage of the lowlands in their valleys would be practicable and profitable, even doubting one's ability to draw off all surplus water and yet leave sufficient moisture for a crop, especially in a dry season. They have seen no examples of the effect of thorough underdrainage upon the soil, and of the profitable returns of such investments, or they could not rest content with the water-soaked condition of the richest land in their farms. My correspondent was assured that he could invest his money in tiling with absolute assurance that the drains would give him as dry a soil as he would wish, provided they were put in properly and provided the land was not full of underground springs and seeps that might be difficult to catch.

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**WET LAND PREFERRED.**—I have often thought that if it were my privilege to select a new farm for myself the choice would fall upon land that was wet, naturally fertile and having facility for underdrainage. There is a large amount of such land upon the market, buyers usually choosing dry land that has been robbed of much of its fertility, having been under cultivation from an early day, while the wet land has lain practically idle. Not all wet land can be made productive by good drainage, of course, and care must be exercised to make sure that the land one proposes to buy and drain has large stores of plant-food in it. This point being settled, the next consideration is the outlet and the grade of mains and laterals. I should have this matter determined by a competent engineer, so that an exact estimate of the labor of underdrainage and amount of tile might be made. Having the prices of the various sizes of tile, delivered at one's railway station, the cost of underdrainage would be known before a purchase was made, and when added to the purchase price would give the actual cost of a fertile and well-drained farm. Such a farm often costs little, if any, more than a naturally dry farm, and needs far less nursing and husbanding of its fertility.

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**NEARNESS TO GOOD MARKETS.**—In the selection of a farm the proximity to a good local market would be a vital one with me, if proposing to engage in the production of fruits, vegetables or other farm crops that can be sold directly to the consumer. The owners of such land have a marked advantage in times of seeming overproduction. There need be no heavy transportation charges or dependence upon middlemen. The man who can draw his potatoes and fruits and hay to market on his own wagons can make sales while shipments from a distance go begging for buyers. The local market is gradually becoming the only safe one. It may be glutted at times by shipments

from farms at a distance, but the local producer can get far more clear money out of it than his competitors, and can win in the long run. A good local market adds more value to a farm than the difference usually made in the price. As the country grows older the state of affairs will become more and more marked in certain lines of production.

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**ONE'S NEIGHBORS.**—The greatest consideration of all in choosing a new home is not the fertility of the land nor its nearness to market, however important these may be, but it is the character of the community. The farm is a home for its owner's family, and the public spirit and temper of that neighborhood is of vital importance. The variation in character of communities is precisely similar to that found among individuals. One neighborhood is progressive, has culture, believes in education, and is such a friend of law and order that the lawless find no home in it. Another neighborhood is hampered in its efforts to improve itself by a more or less influential element that cares little for education or progress along any line. Still another is completely dominated by a spirit that is hostile to the best progress. Our children need the best in their surroundings to inspire them to be and do and become their best. They measure themselves and their efforts by those around them, and their associates and the spirit of the neighborhood have greater importance in the estimation of thoughtful men than the material attributes of a farm they would think of selecting. The selling price of a farm is materially affected by the character of the neighborhood.

DAVID.

## DRILLED WELLS

Among the many expedients resorted to in order to furnish water for the requirements of the farmers in the past was the dug well. This process was adopted from necessity, as in the time of crude tools it was the only practicable way of getting a water supply where nature had failed to deliver it at the surface of the earth in sufficient quantities. Of late years, however, the farmer has, since the advent of the improved drilling machinery, been aroused to the importance of a

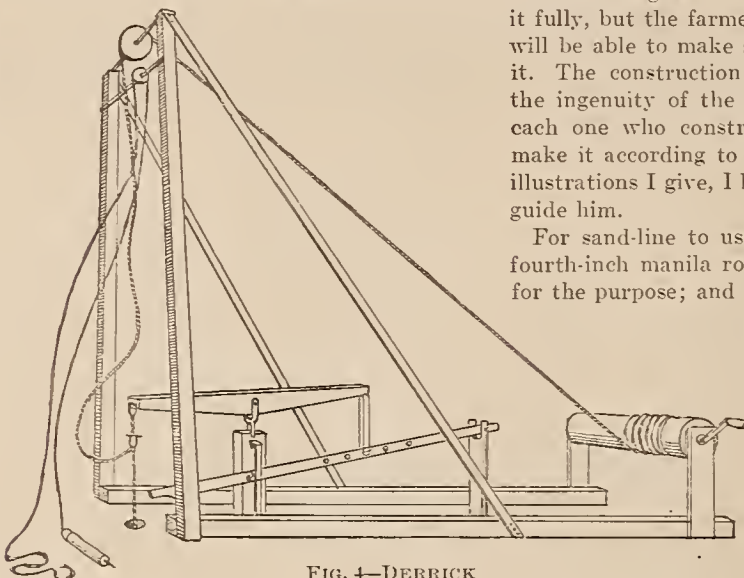


FIG. 4—DERRICK

water supply absolutely pure. As the only successful way of getting this supply of pure water is by casing to the rock and cutting off the impure surface-water, and drilling into the rock until an artesian stratum is struck, which furnishes water made pure by filtering through the rocks and sands of the earth, the drilled well is now in universal favor.

The only disadvantage that this method of procuring pure water has for the average farmer is the great expense at which these wells are drilled. In this article, however, I will try to convince him that a well can be drilled by his own labor at an expense not worthy of the least consideration when compared with the advantages derived from a pure-water supply.

First let him procure a bar of iron about one inch in diameter and five feet in length. Enough steel should be welded to one end to form a bit. This bit should be made so nearly like a regular bit used on a heavy string of drilling-tools as possible. The face of the bit, or "gage," can be about two or two and one half inches, for starting the well, and can be reduced in gage after the well is cased. A pair of jars should be welded to the other end. The play, or stroke, of these jars may be from four inches to two feet, according to the wishes of the designer; a socket must be at the extremity of the uppermost rein of the jars for the reception of the rope. Fig. 1 represents the string of tools completed; any good blacksmith can

make them at a very small expense. The weight will not exceed twenty-five or thirty pounds, and three eighths or one half inch rope will be of sufficient strength for use with them.

The next thing to be made is the sand-bailer, which can be made in a few minutes by any one. Simply drill two small holes a few inches from one end of an inch or inch and a quarter gas-pipe opposite each other, and insert a wire bent in the form of bail; in the other end of the pipe (which

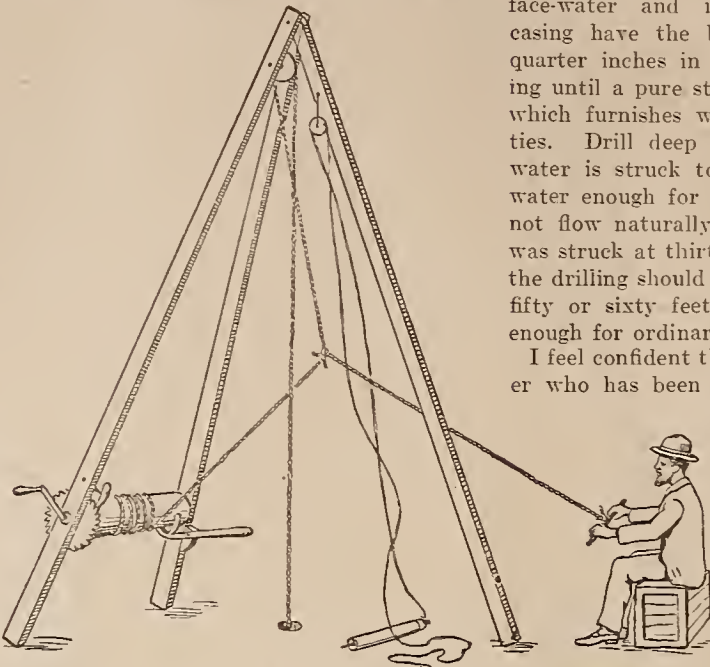


FIG. 3—DERRICK

pipe need not be more than twenty-eight inches in length) drive a wooden core far enough to hold a leather valve-seat, through which there has been driven a large nail or spike about three or four inches long. Fig. 2 explains the method of making the bailer.

The drilling-tools now being described, the next thing which will require attention is the "rig," or derrick. Fig. 3 shows a rig which I used successfully to drill a well thirty-four feet in depth. It requires no effort to make such a rig, and for wells of thirty feet in depth it answers the purpose admirably. The illustration also explains the manner of using when drilling. However, for deeper wells I would recommend rig shown in Fig. 4. The illustration explains it fully, but the farmer of a mechanical turn will be able to make some improvements on it. The construction of the rig I leave to the ingenuity of the builder, believing that each one who constructs one will wish to make it according to his own idea; and the illustrations I give, I believe, are sufficient to guide him.

For sand-line to use with the bailer, one-fourth-inch manila rope is sufficiently heavy for the purpose; and I wish here to say that three-eighth-inch rope has an average breaking strain of 1,300 pounds, and I know it is heavy enough for the tools I have described. For sixty-foot wells, when using a walking-beam, one-half-inch should be used, however, as when using the bailer it need not matter if the rope is not so pliable, and it is easier to fasten the clamps on a one-half-inch than on a three-eighth-inch rope. For a temper-screw for the walking-beam procure one of those small vises such as are used by jewelers, etc., and arrange it as shown in Fig. 5.

There now remains nothing to explain but the operation of drilling. In spudding with rig No. 1, and when starting the hole with rig No. 2, the rope should be kept up tight, and as the drill cuts deeper it should be let out very carefully and not too much at one time. When the rope is kept up tight in spudding there will be no difficulty in keeping the hole round and smooth. Let the tools take care of themselves, and in rock they will turn without any help. Have about two feet of water in the hole all the time; and after drilling five or six inches pull out the tools and use the bailer to remove the sediment from the bottom of the well, which will mix with the water and can easily be removed with the bailer; the sediment entering the bailer through the dart-valve in the bottom of bailer.

In case the tools become wedged in the hole, as they will sometimes do, they may be easily jerked loose by letting out the rope enough to give the jars a few inches stroke, and a few upward strokes of the jars will loosen the tools. A quick upward stroke of the jars will exert a greater strain on the tools than a steady pull of many pounds.

The ease and rapidity with which the tools I have described will drill are simply astonishing to one unacquainted with their use. The bit will need to be dressed occasionally, but will, if made like the bits used on the heavy tools on the large drilling-machines not become blunt; it only wears out of gage, and needs only to be dressed by any good blacksmith, so that it will preserve its correct gage and make the right size hole.

For casing use two-inch pipe, and case deep enough to effectually shut off the surface-water and impure drainage. After casing have the bit made one and three quarter inches in gage, and continue drilling until a pure stratum of water is struck, which furnishes water in sufficient quantities. Drill deep enough below where the water is struck to insure a basin to hold water enough for the purpose, if well does not flow naturally. For instance, if water was struck at thirty feet in small quantities the drilling should be continued until well is fifty or sixty feet, and this will be basin enough for ordinary purposes.

I feel confident that it will repay any farmer who has been using water from a dug well to drill a well by the means I have suggested, and any physician will tell him that the expense of drilling a well this way is not worthy of any thought when a comparison is made between the dug and the drilled well. Water is the best solvent known. As a nat-

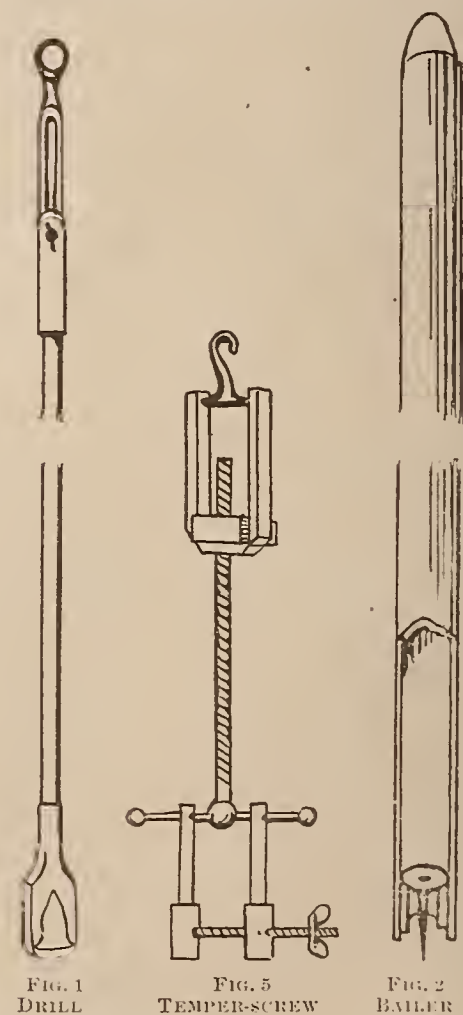
ural consequence surface-water coming in contact with decaying vegetable matter or decomposing animal matter carries impurities into the well. These facts ought at once to convince the intelligent farmer that the dug well is a most dangerous source from which to draw his water supply. The dug well is fast being superseded by the cased drilled well, to make which I have endeavored to show the farmer.

J. G. ALSHOUSE.

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## KENTUCKY AND CANADIAN BLUE-GRASS

In purchasing blue-grass seed it is advisable to deal with reputable seedsmen only, such as are known to be thoroughly reliable, as blue-grass seed (*Poa pratensis*) is now much adulterated with Canadian blue-grass seed (*Poa compressa*), which it very closely

FIG. 1  
DRILLFIG. 5  
TEMPER-SCREWFIG. 2  
BAILER

resembles. On most land the Canadian grass is worthless, and especially so on that adapted to the Kentucky blue-grass. Kentucky farmers of late have been having great difficulty in obtaining pure seed. An almost infallible method of determining whether seed is adulterated is to look for the spines of the Canadian thistle, which are almost invariably present in the Canadian seed and which have no business in seed of *Poa pratensis*. The cause of the adulteration is found in the fact that Canadian seed is worth but about one half as much as Kentucky blue-grass seed.

GUY E. MITCHELL.

## NOTES FROM GARDEN AND FIELD

**THE EGG-PLANT CROP.**—If I were asked to name the most interesting plant in my garden I would surely think of the egg-plant. If not the most interesting of all, it surely is among those that always excite more interest and admiration than the ordinary garden vegetables. The reason for this is that the egg-plant is of almost tropical nature and decidedly unique in growth and fruiting. It is also one of our best paying garden crops. I grow only one kind for market, the New York Purple (Improved or Spineless), the fruit of which when full grown has a length of nearly a foot and a width of eight or nine inches. A well-grown plant with half a dozen half-grown eggs on it is quite ornamental, too, and I have quite frequently set plants among the other ornamental things on the lawn or border. This year I had about one hundred and fifty plants in my garden in a single row, and the plants about eighteen inches apart. I cannot remember to have ever seen plants bear as well as they did this year. Older garden-books speak of four or five eggs to the plant as the season's yield. I took three or four half-grown eggs off each plant almost every week, and probably dozens of them from some plants during the whole summer. The plants seemed to be bound to set fruit almost in clusters. With the exception of a lull of one or two weeks in midseason demand for the eggs was brisk, and prices good, from three to five cents apiece. Even the fruit that was touched somewhat by hail or damaged slightly by frost late in the season was picked up by some Italian hucksters. On the whole, I am well pleased with the outcome of the egg-plant patch, and shall plant a little heavier next year.

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**ESSENTIALS IN GROWING EGG-PLANTS.**—First of all we must have good plants. So it is necessary to start them early in good heat. I always give the flat sown with egg-plant the warmest spot of the greenhouse. It may be set for a few days close to the hot pipes under the bench, but must be looked after properly and removed promptly as soon as the young plants appear above ground. Prick out in other flats, boxes or flower-pots. Always use the very richest soil, both for growing the plants and for growing the crop in open ground. I always pick out the driest and warmest spot in the garden for growing my egg-plants, and try to plow under the largest possible amount of old manure. I have been bothered a good deal with bacterial and leaf blights, and for that reason always spray the plants with Bordeaux mixture in full strength and a good many times during the season. Even then I have not succeeded in keeping the blights entirely off, but managed to get a good crop of eggs every year right along, notwithstanding disease.

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**THE CRANDALL CURRANT.**—A few years ago I spoke of Ford's "Crandall" currant as a thing of little value, for the reason that it flowered profusely, but failed to set as freely as promised by the introducer. I have about a dozen large plants about nine years old. For several years now these plants have produced fruit quite freely. The fruit of most of them is of very fair size, too, almost as large as small cherries. But I have not been able to test the table qualities of this currant simply because the berries



FIG. 1

seem to disappear, and I have failed to discover what becomes of them. My hens might have eaten off the berries on the lower limbs, but could hardly have reached those higher up. Possibly birds help themselves to the fruit and gradually strip the bushes. I have, however, failed to ever catch the thieves, if the berries really go that way. My friend, Professor E. S. Goff, of the Wisconsin experiment station, gives his experience with the Crandall in the last report of that station. He grew a lot of seedlings from two samples of the fruit obtained from Cornell University station. One of these sam-

ples was from the most productive plant out of a large number of plants then growing on the Cornell University grounds; the other was from one of the least productive ones. He found a great deal of variation in the size of fruit and in the productiveness of the plants. The best plants, mostly those of the most productive parent, were saved, and during the past two seasons (1896 and 1897) the saved plants have been marvels of productiveness, and on some of them the fruit was nearly as large as Morello cherries. While the Crandall currant has not yet become popular as a market or dessert fruit, Professor Goff pronounces it excellent for jellies and preserves, and thinks that were its qualities better known it would doubtless be more prized.

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**LATE TOMATOES.**—There are others besides myself who picked out the new "Honor Bright" as the tomato for late artificial ripening. It seems certain that this tomato is admirably adapted for summer shipment to foreign countries or long distances generally. Picked in the yellow stage (before spoken of), and properly handled, it will keep for weeks and ripen in good shape. My later trials in keeping and ripening them for Thanksgiving and Christmas, however, have come to naught. Just at the time that I wanted to gather the specimens for this purpose a terrific hail came and not only damaged almost every tomato on the ground not fully covered by another, but also tore the already aged vines to pieces so thoroughly

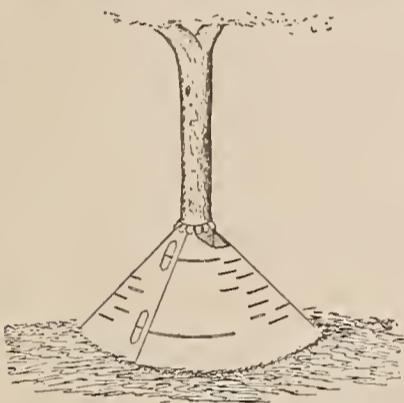


FIG. 2

as to kill them outright. The specimens of fruit left after this ordeal were not fit for any conclusive test. I gathered a few of the best and wrapped them in waxed and tissue paper as proposed, but most of them soon rotted. I am inclined to think that wrapping in anything is not exactly necessary, and it may be even not as good as storing the tomatoes simply in crates in a cool room until the time that they are wanted for the ripening process. Then, of course, they are to be spread in single layer in a warm and sunny room, where they will soon color up and be fit for use or sale. On the whole, it seems to me that we have some things yet to learn about this business before it would be safe to go at it on a large commercial scale. Experiments are yet in order.

T. GREINER.

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## INGENIOUS DEVICES FOR PROTECTING TREES

The proper growth and development of ornamental trees has become a very important factor in beautifying nearly every town and city in this country. The kinds of shade-trees to be selected for the various streets and avenues of cities is a question which has been given much consideration, and justly so, because much depends upon the selection of trees which will offer the desired shade, and which will be beautiful in form and color, and which will not be liable to the ravages of insects and the action of the elements. There is, perhaps, no other city in the world, certainly not in the United States, in which there are more kinds or varieties of trees than may be found in the national capital. In the capitol grounds, botanical gardens and the agricultural department grounds are to be found trees and shrubs from nearly every part of the globe. Many of these trees have been planted for experimental purposes, and in many instances the experiments have in great part been successful. Trees from China, Japan, Brazil, the West Indies, Europe, Asia, Africa, many from the Holy Land, and from nearly every section of the globe may be found in some locality within the city of Washington. Every variety of maple and oak, and there are many, may be found in the capitol grounds. Among the rare

specimens may be found "Christ's-thorn" tree. Besides, there are many trees planted by noted men still standing in these grounds. Directly in front of the entrance to the Senate chamber, for instance, is a large elm-tree planted by Washington. While this tree is not beautiful, either in color, form or leaf, it is guarded with great care, owing to the historical event connected with it. Another tree just at the approach to the east entrance to the House of Representatives was planted by Henry Clay. Some years ago, when changes were rendered necessary in the grading of walks and improvements of grounds around the capitol, the advisability of removing this tree was considered, and it was decided by resolution in the House of Representatives to "spare that tree."

In view of the fact that considerable time and expense are attendant upon the proper protection and raising of these trees, it is not to be wondered at that many patents have been granted for devices calculated to succor and defend trees from insects, rodents and the elements of nature. In a class of records in the United States patent-office, entitled "Trees, Plants and Flowers," there is a subclass called "Trunk-guards." In this subclass alone there are somewhat over one hundred patents, and these patents show devices of considerable ingenuity for their purpose.

A patent was granted about twenty years ago to a Missouri man for the contrivance shown in Fig. 1, which is cut from a copy of his patent.

This invention has for its purpose the protection of fruit and ornamental trees from caterpillars, borers and other injurious insects, and one of the features of the invention consists in making a device which can be placed upon trees of any size, owing to its adjustable character, and not prevent their growth. The contrivance consists of a spirally wound strip of thin sheet-metal, formed with a smaller opening below, which is arranged to set close to the tree and flaring open at the top. This basin is suspended at the desired distance from the ground by two or more wires attached above to nails or similar fastenings driven into the tree. Within the basin thus formed a medicated substance is placed, consisting of a chemical or medicated soap, which is wrapped in raw cotton, wool or other fibrous material in the form of a bandage and packed closely around the tree in the bottom of the basin. Then a loose layer of cotton or wool is inserted at the top. The effect of this arrangement is that the rain and moisture trickling down the tree will be intercepted and gathered in the basin, where it will soak down through the cotton into the soap, dissolving a portion of it and permitting the medicated liquid to trickle slowly down through a few perforations which are made near the contracted portion of the basin. This chemical substance settles about the roots of the tree and forms a thin glazing or covering through which the borers cannot penetrate. The active effect is that these bandages in the bottom of the basin, being kept continually moist with the solution, will form a circular barrier through or over which worms, ants or other insects cannot penetrate. Any kind of chemical soap may be used, or a piece of soda, borax, pitch or other insect or vermin repellent material may be used in the basin instead of the soap. Every shower of rain will thoroughly cleanse the tree, and the tincture around the roots will effectively prevent the approach of destructive vermin.

This contrivance would seem to be capable of serving a very valuable purpose, and it is a matter of some surprise that it has not been largely adopted.

Fig. 2 shows another device, which consists of a sheet-metal protector made somewhat in the form of a circular tent, and applied either at the trunk of the tree near the ground or inverted and secured

at some distance above the ground, as shown in the illustrations of Fig. 2. The sheet-metal is slit or perforated to admit light and air to the trunk of the tree, and it is designed to be filled with a fertilizer or some substance calculated to enhance the growth or protect the tree. At the smaller opening the metal is bent downward to form lips to make the protector adjustable and to permit the tree to grow without undue contraction at this point. When the device is inverted it may also be filled with a chemical compound or fertilizer, which is disseminated by the action of rain or moisture

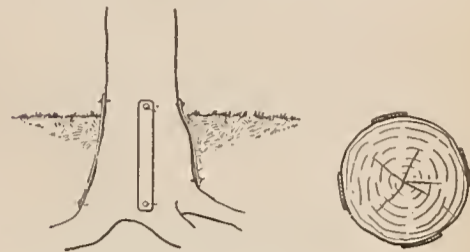


FIG. 4

falling into the upper portion of the protector and trickling down the tree.

Another simple and what would seem to be an effective device for preventing canker-worms or other destructive insects or larva from reaching the leaves of trees is shown in Fig. 3.

As shown in this illustration, the device consists of a leather band or belt armed with card-teeth or metal points projecting outward, and the band or belt is nailed or otherwise secured to the trunk of the tree at the desired distance from the ground. The wire teeth are arranged at such distances apart in the leather belt that the feet of a canker-worm cannot rest on more than one of them at a time, and will, therefore, render it absolutely impossible for crawling worms or insects to pass the barrier thus formed. Such a simple device would seem to be very desirable for this purpose.

A contrivance designed for the same purpose has been quite extensively used in various places where valuable trees required protection from caterpillars. A roll of cotton batting has been secured about the trunk of the tree at a distance from the ground, and this seems to serve to prevent worms from passing over to the upper part of the tree.

Many devices have been patented and are shown in the class referred to, having for their purpose the protection of trees against frosts and from destruction by gophers, moles, jack-rabbits and other animals. But an ingenious device, of comparatively simple structure, is shown in Fig. 4, which is cut from a recent patent.

This contrivance was invented by and patented to a Californian. In the specification to the patent it is stated that "in California there is a small burrowing rodent, commonly called a 'gopher.' It lives underground and makes tunnels in every direction, seeking for the roots of plants, shrubs and trees. It is very destructive, and by reason of the concealment of its journeys its approach to or its presence in the vicinity of a tree or shrub is not suspected until the damage is done. This renders it of more importance to protect the tree than to attempt the capture or destruction of the gopher. While the animal will eat off many roots of the tree, this damage is but partial and temporary. The principal injury it occasions is the 'girdling' of the base of the trunk at a point above where the main roots branch, and below the surface of the ground. Whenever by accident or design the gopher reaches this point, it will invariably eat the bark off completely around, and the tree dies. Attempts have been made to prevent animals both above and below ground from reaching the tree by surrounding it at a little distance with a cylindrical shield."

As shown in the illustration, this invention consists in attaching a number of metal strips fastened to the trunk of the tree, the strips extending from the roots to a point slightly above the ground. It is obvious that an animal cannot kill a tree thus protected, and it is doubted if a gopher or other rodent would even attack a tree protected as shown. The contrivance is a simple one, and may be easily applied to a tree, and would seem to serve its purpose fully as well as would a more complicated structure.

EMMETT PAGE BUNYEA.

\* \* \*

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### FARM AND HOME NOTES

EVERY farmer's family should lay out a program of study as well as of work. Let the winter be more or less devoted to theoretical examination of botany, entomology and ornithology, and the summer have more or less time devoted to a practical application of these studies. Do not say you have no time to spare from bread-winning. I will warrant that the family which pays careful attention to such studies will win more bread in the long run, as well as live happier lives, than the family that devotes itself rigidly to plowing and digging. Among the subjects taken up in my family have been roots, bark, tree friendships, cross-fertilization, seedlings, wildings and work with the microscope.

\*\*\*

We must not overlook the fact that soil has a decided effect on the flavor of fruit. As a rule clay soil is preferable to sandy soil for most of our larger fruits. The Sharpless strawberry, for instance, is nearly worthless on sandy soil, but is of highest flavor on clay soil. Such apples as the Belmont and the Yellow Bellflower are much higher flavored in Michigan than in New York. On the contrary, the New York Spitzenberg and the New York Baldwin are much better flavored than those grown in Michigan. California Bart's cannot be compared with those grown in the eastern states. We need to know what pears and apples are best adapted, not only to our own section, but to our own soil.

\*\*\*

The effect of stock on the color and quality of fruit is certainly very great. In an orchard of seedlings very largely grafted to Spitzenbergs, I have seen the Esopus differ from a nearly bright yellow with red flakes to an intense crimson with yellow dots. The shape varied from nearly round on one tree to oblong on others, while the variety varied from crisp and brittle to a decidedly spungy fruit grown on other stock.

\*\*\*

A paper before the recent meeting of the American Science Association describes the work of the termite ants as gardeners. These ants build nests of wood particles, into which they bring the spores of fungi and plant them. This fungus in growth is used for food, and is fed to the young ants. When new nests are built the workers always transfer some of the fungus, so as to have a new crop in growth for their young. Has any one made a thorough study of the work of our own ants in their relation to the fertility of the soils? During a recent trip through Maine I observed that the most barren soils had numerous mounds of loam brought up from beneath the sand, and left on the thin sod. This addition to the humus and to vegetable food is a very appreciable quantity.

\*\*\*

I am proud to know that the Clinton gooseberry, which I discovered, is proving to be one of the best acquisitions in that line. It ripens nearly a week ahead of all other varieties. It is not quite as large as Industry, but has a bright crimson color, and is entirely free from the hairs that unpleasantly cover that sort. All of our gooseberries do better in what we may call partial shade; that is, they do not like the full force of the noonday sun. The Clinton gooseberry is rather more susceptible to sunburn than the Columbus, but not more so than the Houghton and American.

\*\*\*

I have not given up the Rocky Mountain cherry as worthless in this section. I have gotten but one crop from it in five years. Can anybody tell me what conditions are necessary to enable this remarkable shrub to bear a remunerative crop? The bush is entirely hardy, but it suffers from an attack of a fungoid sort about the first of June. This kills the tips of the shoots somewhat, but does not endanger the plants. It should be promptly sprayed with Bordeaux. It is very sensitive to kerosene emulsion.

E. P. POWELL.

### HOW TO WINTER COLTS

It should be borne in mind that winter constitutes with colts, their first year, a very critical period. Why? Because it is then that poor care, shelter, food, water or lack of proper exercise may knock off from their value, when matured, a large percentage. A young colt may be easily stunted or weakened, and even contract disease, on account of bad food and sanitary conditions. Some think it advisable to provide stables

or sheds in which colts can barely exist, to make them tough, but this is exceedingly poor judgment. It is not only unprofitable, but it is inhuman. Warm, snug quarters ought to be had, by all means, for these save food as well as aid healthful growth. In truth, the stable should be warm enough to allow the dung to freeze only in the coldest weather, and never should unnecessary drafts of air occur to endanger the colt's health.

The fact is, everything possible within reasonable limits ought to be done to make the colt thrive. Colts coming out in spring with long hair, prominent ribs and projecting hips, and lousy in the bargain, are far from being a credit to their owners, much less a profit. Such animals are so reduced in vitality that the basis for the following summer's growth is undermined, and they cannot be pastured so advantageously as they could had they been well wintered.

In feeding colts no one grain with hay answers the purpose so well as oats. Corn alone should never be fed, for it has not muscle and bone producing elements enough, and in the hands of an incompetent feeder it is liable to prove decidedly unprofitable. Accordingly, oats are the grain that should be used; and if they cannot be obtained cheaply, or at least reasonably, an excellent ration may be prepared of one hundred parts by weight of bran, fifty of corn-meal and the same of linseed-cake, this to be fed with nice hay chopped in a feed-cutter. Four to nine pounds of this mixed-grain food should be presented to each colt daily in two or three feeds, "compounded" with about its own weight of hay before feeding. Of course, no definite amount can be worded, in that some colts will require more and others less than an average. In several days, or at most in a few weeks, however, an observing feeder will be able to tell to a certainty whether or not the ration for each individual colt should be increased, and after that all is comparatively plain sailing.

FRED O. SIBLEY.

### NOTES FROM CORRESPONDENCE

FROM NEW YORK.—The fall was an exceedingly wet one, so wet, in fact, as greatly to impede the harvest of the sugar-beet. One man has ten acres, and he estimates the output at 125 tons. Others also have ventured into the industry, but on a much smaller scale, and in nearly every case has it proved satisfactory, except the gathering of them in the mud. The product is to be shipped to nearby cities, where factories for the manufacture of beet-sugar have already started. Otsego county bids fair, however, to have a factory of its own in a year or two, and indeed it should, for now it is known that much of its land is adapted to the growth of the beet. Hop-raising thus far has been the chief pursuit, but owing to the ruinously low prices of late years it has dwindled and dwindled until now in many localities scarcely a hop-yard is to be seen. Nevertheless, the prices for hops at present are quite good, fourteen to eighteen cents a pound being paid in the local markets, and, best of all, not since the "good old times of '90" have the prospects been more promising for them to go higher. Space here will not admit of details, but according to statistics old hops are scarce the world over, while this year's shortage of the United States' crops is 35,000 bales; or, in other words, last year we raised 225,000 bales and this year only 190,000 bales. As to the world's crop, it consists in round numbers of about \$60,000 bales. On the other hand, the annual consumption of the world is now acknowledged by standard authorities to be 1,120,000 bales, 180 pounds to the bale being the usual average of weight. Consequently, this season's crop does not equal the consuming demand, and the same thing applies to that of the two preceding years—1896 and 1897. Owing to these facts, the markets both at home and abroad are very firm—firmer than they have been for years, while brewers are working hard to obtain what they will need, but doing it quietly, so as not to arouse suspicion that they are really anxious to get them. The exporting of new hops seems to be on the decline. This is due to the growers not being overanxious to sell, and also that hops of fine quality are "far and few between." Improper weather and severe storms all but ruining the crop this year in central New York. Many pronounce the '97 hops to be fully as good as the '98 ones. Among other things grown here chestnuts have been abundant, their first price (\$2 a bushel) dropping nearly one half. Although potatoes are scarce, they have various prices. They are worth in reality fifty cents a bushel, but often sell for thirty and thirty-five. Pork by the carcass brings five cents a pound; butter, seventeen to eighteen cents; cheese, eight to nine cents, and honey, ten to twelve cents. Apples are too scarce to bear mentioning. For example, one orchard of twenty-five acres (always a productive one heretofore) had about twenty-five barrels of edible fruit. As to buckwheat, the acreage was large, but the yield very small. It commands about forty-five cents a bushel. The corn crop, however, was a good one. F. O. S. Cooperstown, N. Y.

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## THE POULTRY-YARD

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### WHY HENS FAIL TO HATCH

**I**N a majority of cases the cause of failures to hatch is that the eggs are not fertile, being laid probably by hens in a fat condition. If a hen has a sitting of fertile eggs the animal heat of the chicks, after the first ten days, will force her to leave the nest frequently in order to reduce the excessive heat of the nest, caused not so much by the heat of her body as by the chicks. When a hen sticks closely to the nest it is not a good indication, as she is then compelled to give heat to eggs that have no chicks in them. When the hen frequently comes off (especially in warm weather) it is due to lice or excessive heat in the nest, the indication being that all the eggs are fertile and that she will make a good hatch, success being due to the eggs and not to the hen. If a hen steals her nest in a dry barn-loft she will be equally successful as on the ground. The reason that a hen is successful when she steals her nest is that she is in good condition, and the fact that she steals her nest is proof of such and that she is not overfed and pampered. As all the eggs are laid by her all of the chicks should be of the same vitality. But if a person will take away the eggs and give her some from the egg-basket, of all sorts, sizes and shapes, as is done when one "sets" a hen, the hen that steals her nest will not hatch out any better brood on her ground nest than she would in the poultry-house. The success is due to the eggs, and not to the hen. As a rule the hens that desire to sit are fat, though occasionally there are exceptions. The hen will never begin to lay, and then lay regularly, until she reduces her condition, which she does by going on the nest and hatching out a brood, nature providing the fat on her body as a source of warmth. To break her up is to leave her in the condition unfit for laying. It will be noticed that when a hen is broken up quickly she lays a few eggs and then begins to sit again. The proper plan is to let her stay on the empty nest for a week or ten days, allowing a glass egg, giving a slight meal once in two days, but plenty of water. This will reduce her in flesh. Then put her in a coop having a slat bottom and sides raised a foot or more from the ground, feeding lightly. When broken up she will lay regularly. When two hens are sitting, one may fail and the other may be successful. The fault may always be traced to the eggs. One thing must not be overlooked, which is, if there are a dozen hens in a yard all may not be strong or in the most favorable condition for producing young. One may have twelve different individuals to study, twelve different shapes, sizes, capacities, preferences, peculiarities, and twelve methods to learn in management. Though apparently alike, some hens will produce vigorous offspring, while others will not. Nearly all the failures may be traced back to the parents, for they are the foundations upon which everything rests. As to the offspring, all depends upon the hens that lay the eggs, and not the sitters.

### INCREASE THE PRODUCTION

In many localities the "barn-yard fowl" will not give way to improved breeds. If you cannot afford to buy an entire breeding-pen of pure stock, at least obtain a full-blooded cock, and send the old common rooster to market. This will greatly improve matters, if you are careful to retain the best pullets of this cross-breed, and when you have a stock of good ones sacrifice the common hens. Cannot farmers be prevailed upon to do this? Is not the supply of eggs, even in the villages, absolutely too small in winter? When eggs are scarce and the prices high, do not some diminish home consumption, and even then complain of the small number they have to take to market? A good thoroughbred hen will lay nearly fifty per cent more in the number of eggs than a common hen. If the prices diminish a little the increased production of eggs will much overbalance the account, and, besides, when the grocer receives a large supply he will send them to the city markets. Too many persons raise poultry without regard to the use of pure breeds and regardless of an effort to maintain the high standard to which some of our domestic fowls have attained. The increased evidence of the fact that high-class poultry pays is surely sufficient to encourage us to strike out boldly and extensively in the field of enterprise. Every effort in this direction will meet with

such favor that success will surely follow. Contrast the present with the past, and notice whether the improvement in poultry has been a paying venture. Let us not hesitate to try common-sense methods lest they interfere with the purpose of filling our pockets. We must not drift from year to year in the same channel where the waters are not disturbed by the force of progression, or we will surely become the inactive agents of a system that destroys all incentive. The present is an auspicious time to move in this matter, and it is certainly something that should interest all, and must be conceded to be a theme that should be discussed by farmers and poultrymen and adopted as a rule, both individually and collectively.

### HATCHING AND MOISTURE

Experiments in using eggs under hens and in incubators show that when the eggs were put under the hens eight days and then placed in an incubator they almost invariably all hatched, indicating that one great fault was in the conditions the first week, and that those eggs that failed in the incubator after the first week were not all infertile. The eggs for the first few days evaporate a certain amount of moisture, the air-bubble increasing in size until this excess of moisture has been expelled. Later on they absorb moisture. If the air is too damp this evaporation cannot take place. The amount of moisture contained in the outside air affects the air inside of the incubator, and the amount supplied must be varied accordingly. This excess of moisture must be extracted before the eggs can evaporate to the proper conditions. The failure of hens at times can be traced to this same source.

### TOO MUCH WARMTH

If the hens are kept in rather warm quarters that are heated artificially they will become tender and more liable to colds and disease should they at any time be exposed. On the contrary, a fine that will warm a house only sufficiently to dry it and prevent dampness during the prevalence of northeast storms will be beneficial. The temperature of a poultry-house should be kept at about forty degrees, if possible, in winter; that is, avoid the freezing-point. If the house is close the bodies of the hens will create enough heat at night to keep the temperature above the freezing-point. It is best to use the artificial heat only on occasions when it may be required.

### LINSEED-MEAL

Linseed-meal is an excellent food for winter, but cotton-seed meal is not so desirable for poultry. If linseed-meal is used do not give it as a daily ration, but as a change. Three times a week is sufficient, and a gill for a dozen hens, mixed with the ground food, is ample. It can be used every day if the hens are not in good condition, but it gives the best results when not fed so frequently. It is a wholesome and harmless food, and will do more than its share in the promotion of laying.

### TARRED PAPER ON THE OUTSIDE

If you use tarred paper in order to have your poultry-house warm, place it on the outside of the house and paint it. Any kind of waterproof paper will answer if it is painted, and it will keep the cold and dampness out. If used on the inside it condenses the moisture and causes the house to be damp. With a strong frame no boards need be used at all if the heavy three-ply paper is resorted to, but it must be admitted that the boards will be of advantage with the paper.

### SULPHUR FOR POULTRY

A teaspoonful of sulphur in a quart of soft food given the hens on dry days is one of the best medicines where disease appears, and it is excellent when burned in the poultry-house, as the fumes of burning sulphur will not only destroy the lice, but also the germs of the disease. Do not add it to the food during damp weather. As it is cheap, a supply should be kept constantly for use.

### NEW FAVORITES

The Barred Plymouth Rock, the idol of the American fancy for many years, like the good old sterling Light Brahma, is meeting with dangerous rivals in the White Wyandotte and Bluff Plymouth Rock, with another dark horse looming up in the Buff

Wyandotte. At many shows the White Wyandottes lead all other varieties in point of number and in quality, while the Buff Rock is traveling dangerously close to these. The fact that no breed can expect to hold the permanent place at the head of fowldom, especially in this age of new ideas, is patent to all close students of human nature. Chicken fanciers are no different from men in other lines of business or thought. They hanker after the new, and if the latter has wearing quality it will live, and often at the expense of the old and tried.

Take the famous old American Dominique. Where are they to-day? The Barred Rock has slowly but surely wiped them off the fancier's slate. So it will be with other old stand-bys, although the name of Plymouth Rock will never down, and the Buff and White varieties owe much of their lasting popularity to the name, albeit they are as good fowls in a practical and fancy sense as any that exist on earth.

We know that many old veterans of the fancy have viewed with alarm the growth in popularity of these new-comers, and even went so far as to condemn their dissemination, yet to the broad-gauged fancier this looks rather petty and selfish. Still the old boys hate to see their trade drop off, and self-preservation is their first thought. The stubborn fact that these alleged feather-bed pretenders have come to stay remains however.

The Langshan needs a little more pushing, and its admirers should not go to sleep with the idea that a good thing can't be lost. There is no better fowl among the heavier breeds than the Langshan, but the poultry public will never be aware of it if the champions of the breed neglect to sing its praises. —The American Fancier.

### INQUIRIES ANSWERED

**Hardy Breeds.**—J. E. E., Winnipeg, Canada, writes: "Of the various breeds I wish to select one or two that are hardy and capable of enduring our cold winters."

**REPLY:**—The Brahmas, Cochins, Langshans, Plymouth Rocks and Wyandottes are probably the most suitable, in the order named.

**Grains in Winter.**—F. S., Berea, Ohio, writes: "How should grain be fed in winter as a variety and in a manner to derive the best results?"

**REPLY:**—Wheat, corn and oats occasionally mixed with buckwheat, scattered over the ground or in the litter, using but a limited amount in the morning and giving a full meal at night, is an excellent plan. The fowls should also have green bone, meat and green food.

**Swelled Heads.**—M. R., Lawrenceville, Va., writes: "What is the cause of swollen heads on turkeys and chickens, and what is the remedy?"

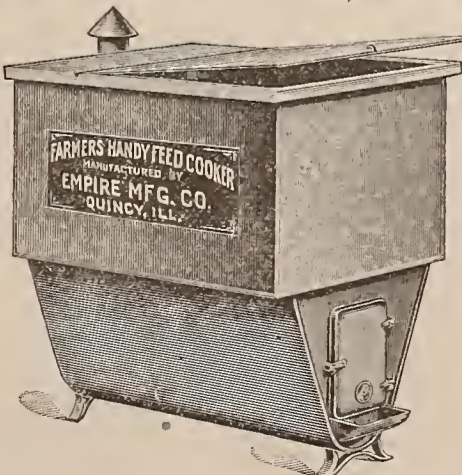
**REPLY:**—The fact that both the turkeys and chicks are affected indicate that it is contagious, being no doubt roup, aggravated by exposure to dampness. The best remedy is dry quarters, meat diet and anointing of the heads and eyes with camphorated oil. There is no sure cure, as the labor of handling the birds is great.

**Plan of Poultry-house.**—W. H. D., Lake City, Ill., writes: "Could you give a plan of a good poultry-house for farmers?"

**REPLY:**—Over a hundred illustrations have been given during the past in these columns. Ideas differ greatly, and much depends on the amount to be invested in that direction. A poultry-house that would be satisfactory to one would not be accepted by another. A house eight feet high in front, six feet at the rear and ten feet square, facing the south, is the best in proportion to cost.

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## QUERIES

### READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

**Celery Query.**—J. D., Woodstock, Va., writes: "My late celery-plants are growing nicely, but yet small and not fit for use this fall. How can I best protect them from freezing and keep them growing all winter for early spring use?"

**REPLY BY T. GREINER:**—You cannot expect to make your plants grow much during the winter. If taken up with some soil adhering to the roots, then stored in trench, cellar or other place where the roots can be kept moist, the tops dry, and all from freezing, in the dark, the plants will make a little growth from the heart, and perhaps give you at least small but well-blaunched stalks.

**Canvas Covering.**—L. F. K., Leesburg, Fla., writes: "I intend to cover some ground with canvas to do some early truck-growing this winter. Please give some addresses of canvas-factories."

**REPLY BY T. GREINER:**—Some years ago I used a cloth claimed to be waterproof and made by the Waterproofing Fibre Co., of New York. I also got some of this same cloth from Peter Henderson & Co., of New York City. The material, however, does not seem to be strictly waterproof. There appears to be no necessity, however, for buying cloth ready prepared. Prof. Bailey, in "Horticulturists' Rule Book," gives the following recipes: "Saturate cloth or tough, thin manila-paper with pure, raw linseed-oil, or use three pints raw linseed-oil, one ounce of sugar of lead and four ounces of white rosin. Grind and mix the sugar of lead in a little oil, then add the other materials, and heat in an iron kettle. Apply hot with a brush. Used for muslin."

**Butter Not Coming.**—J. C., Summerdean, Va., and others. Frequently this trouble is due to the fact that the cows are nearing the end of the period of lactation, and will be fresh again in a couple of months. The cream does not separate as easily from the milk of such cows, nor does it churn as easily. Treat such milk as follows: As soon as the milk is drawn from the cows pour into every five quarts of it one quart of hot water. Then cool down to a temperature of forty to fifty degrees Fahrenheit. Also keep the cream at this temperature until you have enough for a churning, but do not try to keep it very long; churn at least three times a week. To prepare for churning, mix the cream thoroughly, and ripen it at a temperature of sixty-three degrees until it turns slightly acid. Churn at this temperature, or a little higher if you find by experiment that it does better. If your cows have pure water, proper food, and are salted regularly and frequently, this treatment of the milk and cream will remove the trouble of frothy cream and butter not coming.

## VETERINARY

### CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

**NOTE.**—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

**Requires a Thorough Examination.**—F. L., Oakwood, Ill. If your horse bleeds from the nose, a thorough examination by a competent veterinarian will be necessary.

**A Chronic Ailment.**—N. B. S., Filley, Mo. All that can be learned from your communication is that your horse suffers from some chronic ailment and that you feed him more than he is able to digest. Have the animal examined by a veterinarian.

**Probably Tuberculosis.**—M. E. L., Cannon, Conn. What you describe appears to me to be a case of tuberculosis. I would advise you, in order to obtain certainty, to subject your cow to the tuberculin test. There are undoubtedly veterinarians in Connecticut who are familiar with its application.

**Lost the Hair of the Tail.**—H. S. G., Hopedale, Ill. If the hair of your horse's tail has been simply rubbed off, the same will grow again if you free the tail from the scabs, etc., you speak of, by giving it a few good washes with soap and water, and perhaps with a creolin solution. If, however, the hair has fallen out, and is yet falling out, your horse will have a so-called rat-tail, and any treatment will be in vain.

**Barren Sow—Wild Parsnip.**—G. W. D., South Prairie, Wash. The best you can do with your sow is to fatten her and to prepare her for the butcher.—Wild parsnip is not known to me to be poisonous. It is different if, misled by the similarity of the names, you mean "fool's-parley" (Aethusa Cynapium), which is very poisonous.

**A Wart.**—W. E. G., Brauden, Vermont. If your cow has, as you say, a "large seed-wart between the hoofs of a hind foot," which you wish to have removed, it is advisable to employ a veterinarian to perform the required operation and not attempt to do it yourself. Cattle, at any rate, are very particular about their hind feet.

**Sheep Dying.**—A. T., Belmont, Ind. Unless you have omitted the most essential and characteristic symptoms in your description of the fatal disease of your sheep I do not know the same and cannot answer your question, but advise you to make a close post-mortem examination, and particularly a careful dissection of the liver of the next sheep that dies.

**Poor and Lousy.**—S. H., Linden, Ariz. If your mare, already advanced in age, is poor and lousy, it is more than probable that the lice constitutes the cause of her poverty. Wash her either with a tobacco decoction or with soap and warm water, and then with a four or five per cent solution of creolin in water, but at the same time have the stall or place in which she is kept so thoroughly cleaned that no lice or nits are kept in hiding, and repeat this treatment in about five days.

**A Fistula in the Udder of a Mare—Weak in Hind Quarters.**—M. N., Hillsboro, Ind. Before anything can be successfully done to the fistula in the udder of your mare, first its bottom, or source, must be ascertained, and a careful examination must be made. It will, therefore, be best, especially as probably also an operation will be necessary, to employ a competent veterinarian to treat the same.—Weakness of a paralytic nature in the hind quarters of a horse, particularly if it has existed already for two years, is incurable.

**Looks Like a Case of Glanders.**—W. L. G., Daleville, Ark. What you describe looks very much like a case of glanders, and I have to advise you to separate your mule, to be careful in handling the same so that you and yours may not become infected with that dreadful disease; also to inform at once the proper state authorities, but particularly the state veterinarian, if you have such an officer in your state, who will then come and examine the animal, and if he finds the disease to be glanders will make all the necessary arrangements.

**Bowels Too Loose.**—H. C. S., Georgetown, S. C. Do not drive your horse immediately after a heavy meal, but give, if possible, two hours' time for properly inaugurating digestion before you hitch up for work; further, when starting do not at once begin to drive at full speed, but drive rather slowly for at least the first mile, and when coming home slow up for the last mile, and then do not feed a heavy meal at once, but give first a little hay, and not any grain until the horse has cooled off. If you follow the above advice I think you will have no further cause of complaint, and the bowels of your horse will work all right.

**Tuberculin and Protective Inoculation Against Black-leg.**—S. B., Bushnell, Ill. Tuberculin is not a remedy, but valuable only for diagnostic purposes, and the other preparation can only be used as a means of prevention. Neither of them is intended to be used or to be applied except by a very competent veterinarian; particularly the use of the latter may become productive of great damage if any mistake whatever is made in its application. Both preparations can be obtained from the Pasteur Institute, in Chicago, but I hardly think that they will be sold to anybody who is not thoroughly competent to apply them.

**Hog-lice.**—E. H., Battle Creek, Iowa. You can free your hogs from lice if you wash them first with soap and water and then with a four or five per cent solution of creolin in water, provided you thoroughly clean the premises at the same time and effectively free them from all lice and nits; for if this is neglected the hogs occupying the same premises after the washing will soon be just as lousy as they have been. The washing must be repeated on the fifth or sixth day, and to be on the safe side it is advisable to repeat it once more on the fifth or sixth day after the second washing. All half-way measures have only a temporary effect.

**Looks Like Foot-mange.**—E. P., Aledo, Ill. What you describe looks like a case of foot-mange. First give the affected parts a thorough wash with soap and warm water, and then, before they are perfectly dry, another good wash with a five-per-cent solution of creolin in water (1 to 20); repeat the latter wash once a day for about a week, remove immediately after each wash all the bedding and manure, clean the stall in a thorough manner and provide clean bedding. That it will be advisable to extend each wash a little beyond the affected parts will not need any explanation if it is kept in mind that some mites may have recently migrated to adjoining parts.

**Perhaps a Case of Botriomycosis.**—H. C. M., Junction City, Ohio. What you describe appears to be a case of botriomycosis, a disease which does not very easily yield to treatment, particularly during the fly season of a hot summer. Since winter is approaching you may succeed in bringing it to a healing provided you keep the animal in a clean stall and provide at least once a day a radical change of clean bedding; if you apply twice a day to all the sore places a mixture of iodoform and tannic acid, equal parts by weight. If you do this, and do not see any change for the better in a few days, you will have to tie your mare in such a way that she cannot lie down, or else have her treated by a competent veterinarian.

**Probably a Case of Heaves.**—A. D. B., Schaghticoke, N. Y. What you describe appears to be a case of so-called heaves, or, in other words, a case of chronic, feverless and incurable difficulty of breathing. You can, however, to a certain extent alleviate the difficulty of breathing if you feed the animal but very little rough food, give, if possible, no hay at all, and substitute grain, some clean oat-straw, some carrots or turnips, and occasionally a bran-mash; further, if you see to it that the bowels of the animal are never constipated, or if they are, relieve the costiveness by feeding a bran-mash, and finally if you give the horse a place in the stable in which the air is as pure and fresh as possible, even if it should be the coldest place in the stable.

**Wants to Make the Mane Grow.**—D. P. D., Georgetown, D. C. If the hair of the mane of your horse is falling out, or if the same is rubbed off in consequence of an itching sensation felt by the animal, you may possibly prevent a further loss by removing the cause of the itching sensation, consisting, perhaps, either in microscopic fungi or in the presence of lice or mites. A few good washes, first with soap and water, and then with a five-per-cent solution of creolin, or a little gray mercurial ointment rubbed in along the roots of the mane, and the next day washed off with soap and warm water, will answer the purpose. If the hairs themselves are diseased there is nothing that will make them grow, unless the causes of the disease are known and can be and are removed.

**Possibly Cow-pox.**—M. A. P., East Monroe, Ohio. What you describe is either genuine or maybe so-called spurious cow-pox. If the former, not at all a dangerous disease, hardly any treatment is required; but as it is contagious, and communicated from one animal to another by the milk, it may be advisable to inoculate every animal that is yet free, so that thereby the inconvenience may be considered shortened. You undoubtedly made a mistake when you sold the cows that had the disease and bought others which never had been affected, for by so doing you simply perpetuated the prevalence of the disease in your stable. Those that had had it would never have got it again. With so-called spurious cow-pox it is somewhat different, but your description corresponds much more to the genuine than to the spurious article. It is not advisable to use the milk of the affected animals for human consumption until the eruption has disappeared. The disease, as a rule, runs its course in an individual animal in about twenty-one days.

**A Lamé Horse.**—J. P. M., Lake Grove, N. Y. If your horse has navicular disease, the diagnosis of your veterinarian, it was a grave mistake to cut away the quarters (posterior parts of the hoof) and thus to throw all the weight upon the diseased parts, the navicular bone and the tendons. It would have been far better to pare away from the toe-part of the hoof and to shorten the toe, because by doing so the diseased parts, to a certain extent, would have been relieved. The more pressure is thrown upon the frog the greater will be the pain, and consequently the more severe the lameness caused by navicular disease. Based upon this fact is the diagnostic test sometimes applied to secure the diagnosis if there is doubt. It consists in putting a bar-shoe on the lame foot, so as to cause increased pressure upon the frog. If this is done and navicular disease is present, the lameness will at once increase, while in a case of founder the lameness will very perceptibly decrease if a good bar-shoe is put on. Navicular disease is practically incurable. It is true the lameness may be hidden by cutting the nerves leading to the diseased parts, but this is an operation which I cannot recommend, because sooner or later it is apt to be followed by very bad consequences, particularly where the hoof already, like in your case, shows considerable degeneration. May it be possible that the operation just mentioned has been performed on your horse before the same came into your possession? If so, the symptoms described by you, although in that combination rarely, if ever, occurring in navicular disease, would all be accounted for. See whether there are small perpendicular scars just in front of the flexor tendons about midway between the fore knee and the pastern-joint. If there are I would not hesitate a moment to say that your horse has been "nerved" to hide the lameness caused by navicular disease before he came into your possession, and that you received a worthless animal when you probably paid for a good one.



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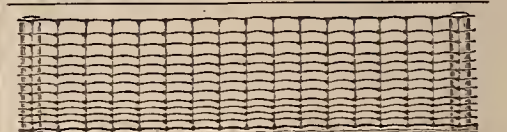
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the foreign markets, although we have not yet fully supplied American farmers. Busy every minute, but glad to hear from you.

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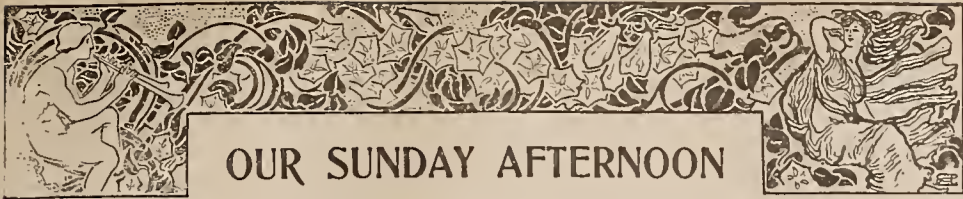
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## OUR SUNDAY AFTERNOON

### THE MASTER'S TOUCH

In the still air the music lies unheard;  
In the rough marble beauty bides unseen;  
To make the music and beauty needs  
The master's touch, the sculptor's chisel  
Keen.

Great Master, touch us with thy skilful hand;  
Let not the music that is in us die!  
Great Sculptor, hew and polish us; nor let,  
Hidden and lost, thy form within us lie!

Spare not the stroke! do with us as thou wilt!  
Let there be naught unfinished, broken,  
Marred;

Complete thy purpose, that we may become  
Thy perfect image, thou our God and Lord!  
—Horatius Bonar.

### MODERN LIFE TOO HURRIED

OUR ancestors in colonial times, or in country districts, or in provincial towns, may have lacked the manifold opportunities which we consciously enjoy and pride ourselves upon, but what they had they had time to appreciate. The flavor of each experience lingered on their palates. They had fewer books, but meditated over what they read; they met fewer people, perhaps, but knew each one far better; they took fewer journeys, but remembered each leisurely pilgrimage all their lives. In reading their old letters we are often touched by the fullness of delight they found in a poem, volumes of friends, a landscape. We have too many friends, too many poems, too many landscapes always on hand to give each one its true claim of time and interest. There are no margins in modern city life.

Even in our emotions—our joy and our sorrow—we need a margin. The heart that is full of the excitement of happiness gains a deeper and sweeter joy under the touch of brooding reflection. The sorrowing soul does not always need distraction, but rather often the space to learn, bravely and silently, the great lesson that has been sent. The margin harmonizes and frames the picture, whatever it be. And the life where one incident, one pleasure, one experience, crowds so closely upon the other that no interval is clearly perceived, is a life whose beauty is subtly marred and whose wisdom is doubtful.—Harper's Bazar.

### IMAGINARY WOES

Those who have given most thought and study to the subject concur in the testimony that it is not the work of brain or body that kills, but the accompanying worries and anxieties, combined with unphysiological habits of life, that undermine the sensitive nervous system and ruin the constitution. And here an aggravating fact comes in—in nine cases out of ten the disquieting thoughts and carking cares which are harbored and brooded over are entirely unnecessary and frequently imaginary. There are numberless kinds of worry, and many people seem born with a predisposition to it. When we add to this hereditary diathesis the ambitions and competitions for display, for position, the multiplication of individual wants, and the demands of an increasingly complex home and society life, we cannot much wonder that this fiend carries forebodings and restlessness into the home circle, into places of business and pleasure, and robs the spirit of contentment, the mind of peace, and the body of health. When health is gone the portals are opened yet wider to the entrance and the sway of real and imaginary anxieties, cares and ills. Under their influence the judgment often becomes warped, the will becomes weakened, the intellect clouded and the conscience morbid. We cannot, unfortunately, always control the circumstances of our lives, and in the experience of nearly all of us there are conditions to be endured and cares to be borne for which we are not responsible.—New York Ledger.

### HE DIED RICH

One remarked, as they were coming back from the burial of the dead, "What a sad life our departed friend lived! How unfortunate he was! He never seemed to prosper in his business relations, and at last died poor."

"Had he not some little success in life?" asked the one to whom the remark had been addressed.

"No," was the reply. "His life was a failure. While others about him prospered he did not succeed; his whole life seemed but a struggle with adverse circumstances."

"I do not agree with you," said a voice which had thus far been silent. "I knew him well in life, and I was with him in his last moments, and I should say he died rich."

"You are mistaken," said the first speaker. "All his lifetime he barely had enough to get along, and the estate he left is almost nothing."

"But surely he was respected and honored by all for his excellence of character, and he left a good name and a legacy of generous and noble deeds, a faithful Christian example, and lessons of patience in affliction, of hope in adversity, and of calm and heavenly trust when no sunbeams fell upon his path. His family, too, always found his presence a joy and a blessing, and his children were faithfully trained up for intelligence and duty and a Christian life."

"Then he died rich," was the responsive and emphatic declaration of another, "richer than if he had become a millionaire, his only possession the gold that he could not take with him, and the covetous and selfish use of which were but a sad preparation for his final account."

Who has the surest and most blessed inheritance hereafter, the one who lives for self and the world or the one who lives for God and heaven? Possess the whole world, if it were possible, and we must soon leave it. "Shrouds have no pockets," and the wealth of time has no currency in eternity. So live as to form character approved alike by God and men, and you will not only die rich, but all your riches will bear with you to eternity.

### THE SANITARY ALPHABET

A s soon as you're up shake blankets and sheet;  
B etter be without shoes than sit with wet feet;  
C hildren, if healthy, are active, not still;  
D amp beds and damp clothes will both make you ill.  
E at slowly, and always chew your food well;  
F reshen the air in the house where you dwell;  
G arments must never be made to be tight;  
H omes will be healthy if airy and light.  
I f you wish to be well, as you do, I've no doubt,  
J ust open the windows before you go out;  
K eep your rooms always tidy and clean,  
L et dust on the furniture never be seen.  
M uch illness is caused by the want of pure air,  
N ow to open your windows be ever your care;  
O ld rags and old rubbish should never be kept,  
P eople should see that their floors are well swept.  
Q uick movements in children are healthy and right,  
R emember the young cannot thrive without light.  
S oap and rough towels are good for the skin;  
T emperance suits the body within.  
U se your nose to find out if there be a bad drain,  
V ery sad are the fevers that come in its train.  
W alk as much as you can without feeling fatigue,  
X erxes could walk full many a league.  
Y our health is your wealth, which your wisdom must keep;  
Z eal will help a good cause, and the good you will reap.

—Union Signal.

### FREE HOMES IN WESTERN FLORIDA

There are about 1,000,000 acres of Government land in Northwest Florida, subject to homestead entry, and about half as much again of railroad lands for sale at very low rates. These lands are on or near the line of the Louisville & Nashville Railroad, and Mr. R. J. Wemyss, General Land Commissioner, Pensacola, will be glad to write you all about them. If you wish to go down and look at them, the Louisville & Nashville Railroad provides the way and the opportunity on the first and third Tuesday of each month, with excursions at only \$2 over one fare for round-trip tickets. Write Mr. C. P. Atmore, General Passenger Agent, Louisville, Kentucky, for particulars.

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## The COMPANION and the COMPANION CALENDAR For 1899.



JOHN D. LONG.

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This Calendar is the most beautiful one ever presented to Companion readers, and one of the finest ever produced. It is in three panels which when unfolded disclose exquisite reproductions of three original paintings, picturing the "Ideal American Girl." The twelve colors in which these panels are lithographed preserve the softest tones as well as the richest shades of the originals, while the border of raised gold enhances the brilliancy of the color-work. The Calendar is so designed that no printing whatever appears on the panels, and when the year is ended they can be made permanent ornaments of the home.

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Dec. 8. Congressional Oratory, HON. THOMAS B. REED.

Dec. 15. How the Queen Spends Christmas, MARQUIS OF LORNE.

Dec. 22. Incidents in a Singer's Life, LILLIAN NORDICA.

Dec. 29. Troublesome Travel in Italy, I. Zangwill.



LILLIAN NORDICA.

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## OUR HOUSEHOLD

### A GOOD CHRISTMAS DINNER

THE coming around of the holidays is never felt more keenly than by those whose home-life is broken up and by those so far from home they cannot meet with their families at that time. Homesickness in all its worst forms sweeps over one at this time.

To those who can still meet an undivided family their blessing is great. Times are so close in many homes that much of Christmas giving must be forfeited, but the meeting of the family around the hospitable board can still be indulged in.

The inevitable turkey comes from somewhere, and stuffed at one end with chestnuts and at the other with oysters it always occupies the most prominent place; so of course with it goes good accompaniments—sweet potatoes, boiled onions, slaw, cranberry sauce, celery and pickles, also the side-dishes of jam, jelly, olives and other good things the fruit-cupboard has packed away in its recesses. Sweet memories will be recalled, stories told of times away from each other, and once more the family circle cemented by love.

So for those to whom this will perhaps be a new feature let me give the following menu:

Consomme.  
Turkey, Oyster Sauce and Cranberries.  
Sweet Potatoes. Squash.  
Boiled Onions. Curled Potatoes.  
Celery Slaw. Macaroni.  
Pickles. Olives. Cheese.  
Mince Pie. Pumpkin Pie. Apple Pie.  
Rice Pudding. Plum Pudding.  
Watermelon Layer-cake. Devil's Food.  
Tea. Coffee. Chocolate.

To make the curled potatoes, boil and mash white potatoes as usual, and then put them into a baker and press through a potato-curler, some on top of the dish. Set in the oven to become a pale brown.

For the slaw, make a fine-cut slaw of cabbage, putting in one round of onion and one head of celery, chopped fine. Then cover with the usual slaw dressing. Do not use olive-oil in it unless you are sure all your people like it.

The best rice pudding is a cupful of rice to three pints of milk, sweetened to taste, and a pinch of salt added. Bake three hours, not letting it brown on top until nearly done; stir frequently, and add hot milk as the other is absorbed by the rice. This is good hot or cold.

The plum pudding can be made two weeks before, if you wish, and can be heated in the steamer the day it is used.

The two cakes given are a pretty contrast, and add to the beauty of the table.

Use any green you may have as decorations—holly or cedar—and bring your house-plants into prominence for that day. Let it be a day of joy and good cheer, and let some of it shine out into the hearts of the lonely ones to whom it may be a sad, sad time. E. B. R.

### A PEEP INTO A CHRISTMAS-BOX

A needle-cushion and thread-case combined, designed for a little girl, had for its foundation a pasteboard box two inches square and about the same depth. It was covered with dark-blue silk and fitted with a cushion of crimson velvet. Two narrow ribbons of blue and crimson were attached to each corner midway from top and bottom, and a spool of thread strung on each of the four longer ones and the ends tied in dainty little bows with the shorter ribbons. The case when hung by one corner with a loop and bow of ribbon was both pretty and convenient, with the cushion in the middle surrounded by the four spools of thread.

A doily-case was of two large squares of heavy cardboard, covered with Nile-green denims on the outside and pale pink silks on the inside. Two narrow pink ribbons were attached to the opposite sides of both, to tie the case together after the doilies had been smoothly lain between the coverings. A spray of pink flowers embroidered in Asiatic filo floss would have added to the beauty of the case, but the designer was too busy a housekeeper to spend much time on ornamentation.

A plain white lawn apron had a three-

inch band of dotted swiss set in above the hem as an insertion, and the dots worked with yellow Roman floss (which launders beautifully), to represent daisies. This made a prettier apron than one entirely of the dotted swiss, with an embroidered border, as is frequently done.

A black sateen apron was trimmed across the bottom and up the sides with three very narrow bands of crimson sateen stitched on with silk thread of the same shade, and was really a very beautiful apron.

Another apron, of rather heavy whitelawn, was trimmed in very narrow bands of yellow calico, and was a real beauty. A quarter of a yard of the calico (that being known as corn color, and which will not fade) cost three cents, and furnished material enough to trim three aprons.

A cover for a hot-water bag was made of a bit of crimson eider-down flannel. With such a cover the hot-water bag could be put into baby's carriage when out riding on cold days or in the bed on cold nights.

CLARA S. EVERTS.

### HOME-MADE DOLL-BABIES

Christmas is coming, and many of us are not holding plethora pocketbooks, so ingenious minds and deft fingers will have to lend their assistance in preparing gifts for this joyous season. How often we notice the handsome shop-bought doll-baby is discarded by the small tots for one that is home-made and that is homely indeed. The old-time rag doll-baby still comes to the front, but none come so two-facedly as the doll illustrated.

Out of bleached cotton cut a strip about three inches wide and twelve inches long, round one end like a head, and cut the other end square. Slope in for the neck and body, and stuff this with cotton or wool. Make the face of the white baby with water-colors, and finish the head with a white cap. The square end must be covered with black cloth, the face painted to represent a ducky, and the head finished with a red kerchief. The waist of each doll is dressed as



desired, and the skirt is attached just in the center of the doll. The skirt is like one waist, in material, on one side, and lined with material like the opposite waist. In this way the little ones can have a variety, and one minute may be nursing the white baby and the next be entertained with the old black nanny.

Then all of us have had our pipes and

blown bubbles, small and great, some of which have dropped to earth laden-laden; others have floated skyward as rainbow-tinted as our brightest hopes and fancies. We are only children grown tall, and if we have to be amused with our pipes, let us give the children even a more tangible pleasure in the shape of a "pipe doll-baby," and see how they will bubble over with pleasure. The dolls are not only a plaything, but can be made of use by the little girls who are with pride learning to use their needle. On the back of a bubble-pipe paint a face with water-colors; adorn the mouth and bowl of the pipe with a fancy cap,



dress the stem in a Mother-Hubbard, and insert the end of the stem in a spool of thread. A little bag of buttons is suspended from sleeve or waist, and a unique apron is confined at the neck by a needle (already threaded), and inscribed upon the apron, that all may read, are these words:

My name is Miss Piper;  
I'm not a pen-wiper,  
But if from your shoes  
Your buttons you lose,  
Just bring them to me,  
And directly you'll see  
With what great delight  
I'll sew them on tight.

NANNIE HANGER.

### WHAT SHALL OUR CHILDREN READ?

Years ago this question did not need much thought, for the list to choose from was very short; but now, with the great variety of books and the papers and magazines without number, the matter has assumed an importance which must not be overlooked. The taste for reading which a child develops or acquires is destined to influence all his after-life. It is not wise to wait until a child has learned to read for himself before beginning to foster a love of reading.

Oliver Wendell Holmes, in speaking of an ideal man, said, "Above all things, as a child, he should tumble about in a library. All men are afraid of books that have not handled them from infancy."

A little child who cannot read may be allowed to handle books and look at the illustrations, but should, from the first, be taught that a book is a thing of value and one that must be handled carefully.

In this question of reading, as in many others touching child-life, the mother must not neglect her opportunity. Commence reading to the children before they are old enough to read for themselves, and let the sound of mother's voice be associated with the pretty things read. There are books of Bible stories which will interest the little ones and awaken a love for Bible reading. It is surprising at how early an age a taste for history may be formed if care is taken to pick out entertaining stories from history at first. Nature studies are always interesting to children, and besides the facts taught, children are stimulated to observe. They soon learn to notice everything that comes under their eyes—birds, leaves, insects, way-side weeds and stories—nothing is too small to attract their attention. Encourage them to talk about everything you read to them and everything they see, and you will often find that their bright eyes are discovering facts and beauties that you know not of.

"Little Folks in Feathers and Fur," is a child's book of natural history, of which they never tire and from which they will learn much of their outdoor neighbors.

Do not make the mistake of confining children to solid reading entirely, but let them have Palmer Cox's "Brownies," Grimm's and Andersen's "Fairy Tales," "Robinson Crusoe," etc. When a child has learned to read, and has a desire to read for himself, your work is only just begun. While there never was a time when there was so much good juvenile reading, it is, unfortunately, far exceeded in amount by that with an influence that is positively bad. Guard against indiscriminate reading. Be watchful, and never put a book or paper in your child's hands that you do not know is pure and good. Give them Charles and Mary Lamb's "Tales from Shakspeare," Kingsley's "Grecian Fairy Tales," Miss Alcott's books, Dickens' "Christmas Stories," and for stories of adventure Cooper's "Leather Stocking Tales." Don't neglect poetry. Even little children learn to love Longfellow, Whittier, Ingelow and all our best poets, if they make their acquaintance first from mother's lips. Encourage the children to read aloud to you, and be interested in what they are interested in, or ought to be. Every good teacher knows the power of being bright, interested and enthusiastic in dealing with children. A wide-awake enthusiasm in one's self will sway men, how much more will it lead little children whither you will.

Do not say, "I have no time to do all this." In every busy life some things must, perforce, be crowded out, but the wise mother will see to it that it is the least important things. Let there be less fancy work, less frills and trimmings—yes, less cooking and cleaning, if need be—that there may be time to read and talk with the children. It is only for a few years that the opportunity of so much importance to all the child's future life is yours. The children will grow to be men and women, and then you can take the time for these other things; but if you neglect doing all you can to form a taste for pure, ennobling reading now, when too late you find your child with a vitiated taste, years of regret will not atone for your lost opportunity.

MAIDA McL.

### TRIED RECIPES

**BANANA PIE.**—Bake crust; let it cool. Slice two bananas into the crust. Boil one cupful of milk, one half cupful of sugar, yolks of two eggs and two tablespoonfuls of corn-starch until thin. Let it cool, and then pour over the bananas. Beat the whites of eggs, and spread over the top; put in a quick oven to brown, but do not let the pie get hot through.

**ESCALLOPED CORN.**—One can of corn, one cupful of rolled crackers; salt and pepper to taste. Put in a pan, and cover with milk; chip butter over the top. Bake thirty minutes.

**PEA SALAD.**—Take one can of peas, one stalk of celery and whites of three hard-boiled eggs. Thicken the juice with flour, and add one half of a cupful of vinegar. Boil the peas until cooked through; season to taste. Grate the yolks over the top.

**HAM SALAD.**—Chop fine the remains of a boiled ham, and add the heart and inside head of a lettuce. Pour over it a dressing made as follows: One tablespoonful of butter, one teaspoonful of pepper, one teaspoonful of sugar and mustard, one half pint of vinegar and yolks of three well-beaten eggs; boil until it creams; when cold pour over the ham and lettuce, and mix well. Lastly stir in one cupful of sweet cream.

**FISH SALAD.**—Take cold fish left from dinner, remove all bones and separate in small pieces; pour over and mix with the following sauce: One well-beaten egg, one tablespoonful of mixed mustard, three tablespoonfuls of vinegar and a small piece of butter. Let it just boil to a cream, then pour over the fish, with lettuce leaves chopped fine and well mixed. Arrange small lettuce nicely on a platter, and put a large spoonful of salad on each leaf. In serving, just slip the leaf off upon the plate.

**CHERRY SHORT-CAKE.**—Make a crust as for biscuit; bake in two layers, and spread with either canned or preserved cherries. Serve with cream and sugar.

**FIG DESSERT.**—Make a sponge-cake. Stew figs and pull apart; cover with cold water, and stand over night. Next morning bring slowly to the boiling-point, then turn out to cool. Cut the sponge-cake into squares, put a layer of figs in each square, and over this put some whipped cream. This is delicious.

E. R.

THE SOLDIER'S WIFE

He offered himself for the land he loved,  
But what shall we say of her?  
He gave to his country a soldier's life;  
'Twas dearer by far to the soldier's wife.  
All honor to-day to her!

He went to the war while his blood was hot,  
But what shall we say of her?  
He saw for himself through the battle's flame  
A hero's reward on the scroll of fame;  
What honor is due to her?

He offered himself, but his wife did more.  
All honor to-day to her!  
For dearer than life was the gift she gave  
In giving the life she would die to save;  
What honor is due to her?

He gave up his life at his country's call,  
But what shall we say of her?  
He offered himself as a sacrifice,  
But she is the one who pays the price;  
All honor we owe to her.  
—Elliott Flower, in New York Sun.

A PRETTY WAY TO TREAT AN UGLY DOOR

THOSE doors were the bane of my life, especially the three leading from the parlor into the hall, the bedroom and the dining-room. There were transoms above them all, making them so tall draperies could not be hung with any sort of grace. Season after season I revolved those transoms and doors in my mind. I added wrinkles and gray hair to my list of personal charms, but I seemed no nearer a solution of the problem.

"Mary Ellen," I said, despairingly, "if something is not done with those monsters this autumn I shall have to be taken to an asylum."

Mary Ellen looked at me in that detestably patronizing manner of hers, and complacently replied, "I shouldn't wonder." And then, with a look at the offensive transoms, murmured softly, "Spools."

"Spools?" I echoed, blankly. "Spools?"

"Yes, spools. Number forty or fifty."

"If you have no objection I should like to know what you mean?" I observed.

"Well, if we had a sufficient number of spools we could buy some slim rattans, string the spools on them or cords, remove the transoms, and glue the rattans in the casing. The effect would be so decidedly Moorish you would imagine you were living in the Alhambra."

"And we might stain them walnut or cherry, or paint them white or any color we wished," I began, enthusiastically, ignoring the splendor suggested by the latter part of her remark.

Mary Ellen only looked at me, and I meekly subsided into silence.

"But where could we get a sufficient number of spools?" I queried.

"The village dressmaker might be pressed into service," said Mary Ellen.

"Mary Ellen, don't you think if we took the rattans and cut them the right length they would look as pretty as if we used spools?"

Mary Ellen gave me an admiring glance that warmed the cockles of my heart, and answered, briefly, "Let's try."

And we did try. That afternoon we drove to town and bought three dozen rattans with which to begin, and went to work with a will.

First we removed the transoms; then we cut the rattans the exact length required, and with glue which had previously been heated we fastened them securely in place. Another excellent plan which might be used is to bore holes above and below with a small gimlet. The rattan being flexible is easily inserted. In case the spool grille is desired, this is the best plan. Small staples and a little glue will fasten the cords on which the spools are strung, and after having been treated to a course of staining it forms a very handsome grille.

But we chose the spindle style, and after getting it in shape our next consideration was the curtains. Our family had been fortunate. It had had a grandmother, and our grandmother had been economical. As heirlooms there had fallen to Mary Ellen's lot and mine two sets of old-fashioned coverlets. To add to our good luck, they had been woven in white and indigo blue, and though of different patterns, were both so neat and pretty that when I breathed "coverlets" Mary Ellen actually clapped her hands, and we scrambled off up-stairs to bring down our treasures. They were packed away in the cedar chest and were fragrant with rose-leaves and lavender. We shook out their odorous folds, full of admiration for their decorative possibilities, and rushed to town for further necessities—three of the largest pieces of bamboo that we could find, and fixtures for the poles. We chose fixtures

to be inserted rather than those that are placed on the outside, and then hastened home to hang them.

When the doors were taken down we placed the two pairs of blue curtains opposite each other in the hall and bedroom doors respectively, and for the dining-room door we bought gray crash, just such as has been used for skirts all summer. We stamped large olive wreaths at regular intervals over this and embroidered them in blue. A carpet of blue and gray, a wall-paper with pearl-colored tints predominating, and the reincarnation of our sitting-room was complete.

M. M. M.

SELECTING A CHAFING-DISH AND ITS OUTFIT

It is noticed that the convenient chafing-dish is still unpopular with a few housewives, but in almost every instance those who are not enthusiastic over its merits are the ones who have not selected a good dish with its proper outfit.

A full chafing-dish outfit includes, besides the dish itself, a cutlet-plate and cover for sauteing chops; a steaming-plate, which is the same shape as the cutlet-plate, but with the bottom covered with fine holes, an alcohol flagon, a toast-rack, and two trays, one on which to stand the chafing-dish, and the other for hot dishes or the utensils used in cooking.

One spoon is usually included in a complete outfit, but it is either of aluminium or silver-plated. In place of this two boxwood spoons are recommended. These may be sufficiently ornamented to match the other utensils, and are to be preferred to metal spoons, which not only make a disagreeable sound in stirring, but are apt to scratch the bottom of the dish.

Two small bowls will be needed to hold the raw materials and seasoning, and these may be of the Japanese variety, or the Russian wooden bowls vivid in red and gold.

In selecting a chafing-dish there is now a wide choice as to metal. The old-fashioned chafing-dish of our grandfathers was made of copper, and heated by means of charcoal. Then copper gave place to silver, and brandy and spirits were used for heating.

To-day we have it in many styles, from plain tin to chased silver, and it has been adopted by all classes. Some claim that block tin is the best for real use, as it heats more evenly and retains its heat longer; others prefer silver.

Between these two extremes, in point of cost, come agate-ware, nickel, copper and silver-plate. For one of moderate cost nickel-plate probably gives the most satisfaction.

The lamp should have a sliding cover regulated by a screw; this allows of having a small or good-sized flame, as desired. And the hot-water pan should be provided with handles for easy adjustment while cooking.

S. W. H.

PEN-WIPER

This useful article is made of two pieces of green felt cut heart-shape, and two round pieces of chamois notched and placed between the pieces of felt.

The butterfly is made of orange and yellow satin ribbon—the orange for the upper wings and yellow for the lower ones.



The body is made of a little roll of yellow felt, shaped for head and body by winding a silk thread around it. Plait the ribbon for the wings, and fasten to the body. Then paint the wings at the edge with burnt sienna, making the eyes black. The eyes of the butterfly are black beads, and the antennae are little stamens such as are used for artificial flowers.

LENA J. RINGUEBERG.

For Whooping Cough or Croup, Jayne's Expectorant is the natural remedy. If given according to directions, it usually affords immediate relief.

BABY-SACK

As the cool days advance the wants of the little ones that we have always with us push prominently to the front. Dame Fashion rules in regard to their wardrobe as whimsically as in the fashioning of the older ones.

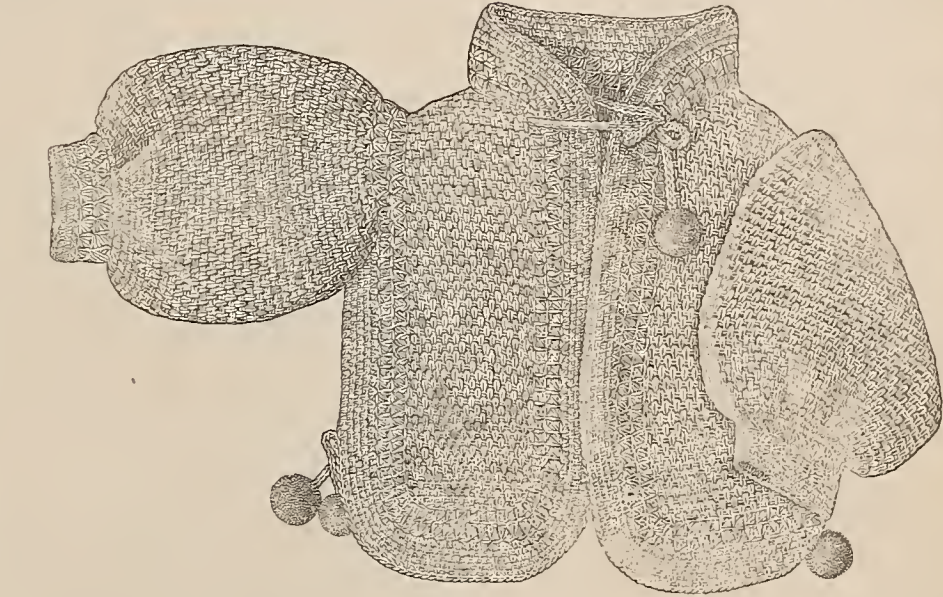
The Mother-Hubbard sack had its day, but now we have the "jersey crochet sack," which has superseded it, and as it is a thing of beauty we give it welcome. The sack requires two and one half ounces of white and one ounce of colored saxony. They are very simple, and any one who is at all familiar with crocheting can easily make one by the following directions:

Commence the sack in the bottom of the back by making a chain of 54 stitches.

First row—27 stitches, with a chain of 1 between each stitch. Continue in this way for forty-seven rows.

Forty-eighth row—Narrow at each end; first narrowing leaves 25 stitches; second narrowing leaves 23 stitches; third narrowing leaves 21 stitches. Shoulder has 5 stitches (one is taken up before the narrowing, 3 in narrowing, and one in last row).

Make a chain of 12 stitches (this is for one side of front) on this chain; do 6 short



stitches; there are 11 stitches in all. Make the front 48 rows deep. The other front is commenced from the other shoulder and made just like the one described.

Join on colored worsted, and make two rows of star-stitch all around the sack. Join on white, and make one row of short stitches all around. In the second row widen in the eighteenth stitch on top for sleeve. No more widenings, but make four more rows of white all around the sack.

Now join the sleeve (there are 36 stitches caused by widening 5 on the front, 5 on the back, making 46 stitches in the entire sleeve). The sleeve is 33 rows deep. Join on colored worsted, draw up sleeve at bottom by chain of one and skip 3 short stitches. Catch down with short stitch.

Make two rows of star-stitch for cuff of sleeve.

A chain of three made of the white worsted is caught down all around the sack.

Lace the sack up under the arms with cords finished with balls. Also run a cord finished in the same way around the neck.

NANNIE HANGER.

THE LAND OF CHILDREN

The old question as to whether surroundings or heredity make the man bid fair soon to be answered by the new colony of children which has been formed by philanthropists in New York.

The idea is that if children, no matter how handicapped by birth, be taken away from all evil surroundings, and be trained and developed according to the latest approved method, taught a new code of morals and manners, a new law of social intercourse, a new conception of the insignificance of the individual, a new race of people can be developed whose motto shall be unselfishness.

This movement was set on foot by Dr. J. N. Newbrough, in 1884. He felt that his mission came to him as a revelation from heaven; that this was the way to secure the betterment of humanity—this segregation and training of little children.

The children that are brought to Shalam to be experimented on, as it were, are "orphan babes and cast-away infants and foundlings." Their home is in the sister state just south of Colorado, and I know from experience how beautifully these Rio Grande valleys can be made to "blossom as a rose," through the magnificent system of irrigation. This bend in the arm of the Rio Grande river, called Messilla, is but fifty miles north of El Paso, Texas, once a part of "The Great

American Desert." Now it is a veritable "Garden of Eden." "God is revealed in nature" is one of the tenets of the colony.

Twenty-five children, whose ages range from one to ten, are already in the home. A healthier, happier lot of little ones it would be hard to find. Everything that possibly can be done for them for their comfort or pleasure is surely done. Their mental, moral and physical natures are carefully and highly developed. We as parents can take many lessons from the directors of these little ones.

It is the design that work shall be made attractive to the children and be a source of pleasure wherein the mind will be diverted and the body exercised. Young as they are, they have their garden for botany and their laboratory for chemistry. Horticulture and agriculture are revealed to them through fields and orchards. The senses are all carefully cultivated from the very first. They are taught to think—to understand the reasons of things. And think of it, mothers, are even encouraged to ask questions!

The dress of the children is neat, comfortable and simple; nothing more is aimed at. As to diet they are vegetarians. The thought all the way through is to take away the bad

tendencies by substituting something better in their stead. They desire to reduce the vices indulged in by those out in the world to a minimum, and develop the mind and soul to the highest degree. And there is much in it.

I can never forget what an old man once said to me: it was, "We boys used to tell the truth, till mother whipped it out of us." They had broken something, confessed it, and were then whipped. The founders of Shalam are more judicious. Mothers, are we always as wise as we should be in our "land of children?" ELLA BARTLETT SIMMONS.

AN IDEA FOR MATCH-SCRATCHERS

The humble office of the match-scratcher is never so much appreciated as when this little article is missing. The right thing in the wrong place is certain to be that unavailable piece of sandpaper on which to strike the needed match.

The ready-made scratchers are deplorably inartistic, but their use is undoubted. A clever way has been devised by a young girl to supply each room in the house with a pretty, appropriate match-scratcher. The idea is so simple and the result so good that it should be described for the benefit of other households.

From a collection of pictures gathered from papers and magazines this maiden selects for her athletic brother an illustration in black and white of a golf-player. This picture is pasted upon a piece of cardboard of the same size as the drawing, five by five inches, and a narrow length of sandpaper fastened at the lower corner to the right. A brass ring is firmly glued at the back in the center of the top. This is pressed carefully before put to use upon the wall.

For the nursery the selection that will catch the attention of the little folks is "Goldilocks and the Bear." In the library a silhouette of Robert Burns is employed. For the music-room the figure of a violin-player. The famous "Chocolate Maiden," now often seen in miniature copy on advertising pages, is chosen for the dining room. On the hall-landing a tiny print of the lovely Queen Louise of Prussia "as she comes down the stairs."

The clever thought embodied in the decoration of each "scratcher" draws out a pleasing inspection before and after the match has been drawn across the sandpaper.

ALICE M. KELLOGG.

## THE CAMERA ON THE FARM

IN these days when a really good camera can be had at small expense it is possible for nearly every one to own one. Where could a pleasanter place for this diversion be found than on the farm? So many farmers never think of providing for their children the amusements that are very common in the cities, then wonder why they are in such haste to get away from the farm.

A good camera, while it will amuse, will also instruct, and will give to young people a taste for art, and teach them to see the beautiful in nature that they might otherwise never observe; and from my own observations I know that those who live close to nature are not in a hurry to get into our bustling, crowded cities.

There will be no end of delight for the whole family in the ownership of one of these instruments, and who would not like to have pictures of the old home, that pretty bit down in the meadow, the purling stream where the cattle come to drink? How many times in after years would these bits of board be treasured when the family around the old hearthstone are scattered and gone. There would we find the family dog and the favorite horse, our prize Jerseys, and the trio of sheep that took first prize at the county fair. Ah, the memories they would bring! How we would live over the old days in looking at them!

The mechanical part is not so hard, either. Any bright boy or girl could, with the book that accompanies all good instruments, learn to develop and print the pictures at home. Patience and a little experience is all that is needed.

Let us hope that more farm homes may soon know the delights of a camera, which will, I am sure, prove a joy forever; at least the one that is owned by the writer has proven so.

IRMA B. MATTHEWS.

## HINTS FROM THE METROPOLIS

The old-fashioned poke-bonnet is to be seen this fall in miniature, for the small child. To be sure, it is ruffled and frilled and shirred, and presents a somewhat different appearance to that worn in former years; still the shape is essentially the same, and quite becoming to the little faces appearing beneath its curved frame. Faille, bengaline and other silks, and velvet as well, together with laces and ribbons and feathers, produce charming effects.

Tam-o'-shanters for the school boy and girl are in vogue this season, and can be seen in cloth or leather or combinations of both.

Very dainty creations in habies' long and short coats of Bedford cord and eider-down are being worn, and are easily made by the home worker because of their simplicity.

The shirt-waist seems bound to stay, and will certainly be much worn this season for home and school wear. Corduroy, velveteen and cashmere are the popular materials, and while warm and serviceable, are also pretty and dressy.

The latest fad in round garters is to cover the plain silk garter elastic with fancy ribbon, shirred about an inch from either side, thus forming a frill at the top and bottom of the garter. A tiny bow completes the arrangement.

Considering the military turn in the affairs of cloaks, gowns, etc., it is not to be wondered at that cadet-blue is one of the popular shades, and holds its own with the reds and purples and browns.

Braid is seen in all its widths and varieties on the fall and winter gowns and cloaks, from the very narrow edging to the large fancy designs, and since the tailor-made gown is in the ascendant it is perhaps the most appropriate trimming possible.

E. L. H. R.

## HOME-MADE COUGH-CANDY

There is no confection that should be so shunned as the cough-drops that are in the market, for most of them contain more or less morphine and other hurtful drugs.

The hoarhound candy of commerce seldom, if ever, contains an ounce of that herb. A manufacturing confectioner once told the writer that they never used hoarhound, but chicory, to give the flavor to hoarhound candy. The following recipes have been in the writer's family for years, and cannot be excelled:

**HOARHOUND CANDY.**—Make a pint of strong tea, either from the fresh or dried herbs. Strain, and add two pounds of sugar to the pint of tea. Boil until brittle when tried in cold water, then pour into shallow, buttered pans. When nearly cold mark off

into small squares. If too bitter, make the tea weaker next time.

**ICELAND-MOSS CANDY.**—Put five cents' worth of the moss to soak over night in cold water. In the morning pick it over carefully, put into a double boiler with plenty of water, and let simmer until it is a thick glue. Add a pound of granulated sugar to every half pint of the glue, and cook until it will form a creamy ball when rolled between the fingers. Pour into shallow, buttered pans, and when nearly cold mark into squares.

**PURE LEMON-DROPS.**—To one half pint of strained lemon-juice and an equal part of water add two pounds of granulated sugar, and boil until it will crack when tried in cold water. Pour into shallow, buttered pans, and mark into squares when nearly cold.

**HOME-MADE TROCHES.**—Mix one ounce each of powdered cubebs, sweetflag-root, licorice and gum arabic; then moisten with one dram of oil of anise and one third of an ounce of oil of cubebs. To this, when well mixed, add one half of a pound of best confectioners' sugar and enough warm water to form a stiff dough. Sprinkle a sheet of brown paper with powdered licorice, and roll out a quarter of an inch thick, and cut out into troches with a thimble. Add a little more water if the fragments get too dry to roll out nicely. Place upon paper in a cool, dry place to get dry, which may require several days, after which pack away in small boxes. Quite a good business can be done by making and selling these simple candies, especially to school-children.

MAY LONARD.

## RECEPTACLE FOR CURLING-TONGS

For this very useful article get your tinsmith to make a tube of a piece of tin five by five inches square, and have two holes punched at the back to pass the ribbon through by which to hang it up. Then take

a piece of white linen the same size, bind it at each edge with ribbon of any color preferred, sew firmly around the tin tube, make two bows, and sew on as in illustration. Now complete all by painting any suitable design in water-color on the linen. The lettering is pretty in olive-green. But for the majority who do not paint, embroider the design in silk floss before putting the ribbon binding on. The edge can be scalloped in white filo floss.

LENA J. RINGUEBERG.

## VARIATIONS ON THE OYSTER THEME

**CREAMED OYSTERS.**—This requires one quart of oysters and one pint of rich milk. Let the milk come to a boil, then add the oysters. Mix one tablespoonful of butter with a generous teaspoonful of flour, and stir in. After boiling up twice this may be poured over slices of toast or eaten the same as oyster stew. Season to taste.

**STEWED OYSTERS.**—Drain one quart of oysters, heat the liquor, and skim. Add one pint of milk, and when it boils skim again; then add a lump of butter the size of a walnut, and the oysters. Season highly with salt, pepper and a dash of celery-salt. When the edges have curled pour into a tureen in which has been put a handful of small crackers.

**OYSTER PATTIES.**—To one pint of small oysters add one scant pint of cream, one large teaspoonful of flour mixed smooth in some of the cream. Salt to taste, and a dash of white pepper. When thoroughly cooked fill the patty-shells, set in the oven a minute to heat; serve at once. This fills a dozen shells or even a few more at a pinch.

**POOR MAN'S DISH.**—Drain one quart of oysters; butter a baking-dish, put in a layer of bread-crumbs, a layer of cold boiled potatoes, sliced, a layer of oysters, salt, pepper and bits of butter, and so on till the dish is full. Pour over it the liquor, and bake one hour. This will make enough for six people. Macaroni may be used in place of the potatoes, or rice, or hominy, but all must be previously cooked.

MARY W. W.

## THE FAVORITES OF TIME

HOW THE MATRON PRESERVES HER MAIDEN BEAUTY.

Has old Father Time his favorites? It would seem so. Two young girls, sisters or schoolmates, assume the responsibilities of wedlock at the same time. They are equally young, equally fair. They walk in even step with Time for a few years, and then they are so different in appearance that they might pass for mother and daughter instead of women of equal age.

As a matter of fact Time has no favorites; he is kind to those who are kind to them-



selves. The younger looking woman will tell you she does not know how it is that she keeps her youth and fairness, she uses no cosmetic, no powder, no paint. The woman who looks so much older will say, "I'm obliged to use paint and powder, I have to cover up my yellow skin and hide these wrinkles." If you probe a little deeper into the secrets of these women, you will find that the youthful one has learned that the best cosmetic is health, and that there can be no general health for the body which is hourly undermined by the local ill-health of the delicate female organs. Knowing this she has taken prompt means to cure the disagreeable drains, the bearing-down pains, and the inflammations and ulcerations, which to a greater or less extent affect most women who experience the tremendous change which by marriage and motherhood is wrought on the distinctly feminine organs.

The older appearing woman will tell you the common story of constant and useless doctoring for backache, for female weakness, for debilitating drains. Inflammation like a fire burns up her strength. Ulceration like a leech saps her vitality. Nature cannot make a bright eye and a pure complexion without rich, pure blood. This woman's blood flows sluggishly along the canals of the body, like some oozy, slimy current, whose motion barely keeps it from utter stagnation.

Beauty is every woman's birthright. A healthy woman is always beautiful. This secret of health and beauty for every woman lies in the recognition of the plain truth that where there are local diseases of the organs distinctively feminine there can be no health and beauty while these debilitating, life-sapping ailments continue.

"But," comes the natural question, "can these diseases be cured? It is no wonder women ask the question in view of the failures of ordinary practitioners. Hundreds of thousands of such cases have in the past thirty years been referred to Dr. R. V. Pierce, chief consulting physician to the Invalids' Hotel and Surgical Institute, Buffalo, N. Y., and although the majority are chronic cases aggravated by injudicious and ignorant treatment, yet the great record stands that of thousands of such suffering women ninety-eight out of every hundred have been entirely cured.

"I feel it a duty to inform you that I had been a sufferer for many years from nervousness with all its symptoms and complications," writes Mrs. O. N. Fisher, 1861 Lexington Avenue, New York, N. Y. "I was constantly going to see a physician or purchasing medicine for this or that complaint as my troubles became unbearable. In the spring of 1897 my husband induced me to try Dr. Pierce's Favorite Prescription. After taking one bottle and following your advice I was so encouraged that I took five more bottles of 'Favorite Prescription' and then I did not take any more for several weeks as I felt so much better, but still I was not completely cured. I commenced taking it again and felt that I was improving faster than at first. I am not now cross and irritable, and I have a good color in my face; have also gained about ten pounds in weight and one thousand pounds of comfort, for I am a new woman once more and your advice and your 'Favorite Prescription' are the causes of it, coupled with your 'Pleasant Pellets' which are not to be dispensed with. I took eight bottles of the 'Prescription' the

last time, making fourteen in all, and will not take any more unless you so advise, for I do not see as I need it. I have often told my friends how I was cured, and have been no little surprised to learn how many of them have also used Dr. Pierce's Favorite Prescription with great benefit. I have induced several to try it, and have heard that they were much pleased with the results."

The record of such cures is unimpeachable, as is the fact that they have been enjoyed by ninety-eight per cent of the women who have tried Dr. Pierce's Favorite Prescription. Any sick or ailing woman can consult Dr. Pierce by letter without charge. By this method there is no subjecting of the patient to the embarrassing questions, offensive examinations, and obnoxious local treatments which frighten so many modest women away from the door of help. You can write freely, frankly, because your letter will be read in private and all its confidences will be held sacred. You can write without fee as without fear.

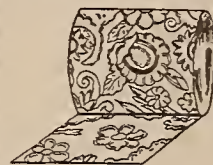
There is no alcohol, whisky or other stimulant in Dr. Pierce's Favorite Prescription. It is equally free from opium and all narcotic drugs, and preserves its virtues in any climate without the aid of syrup or sugar.

The cure of Mrs. Fisher was accomplished by the use of Dr. Pierce's Favorite Prescription. Her cure is but the type of hundreds of thousands. If you want a like cure you'll find it in "Favorite Prescription" only and not in a substitute. If you want a cure you don't want a substitute. You should make any substituting dealer see that as you see it.

A keen observer of human nature recently said: "I mistrust the druggist who endeavors to dissuade me from buying the medicine I had in mind on entering his store. My fear is that he may change my doctor's prescription to make it better suit his convenience and selfish interests." The moral is, patronize the dealer who respects your judgment and gives you exactly what you call for.

One of the best books of the day is Dr. Pierce's great work, "The People's Common Sense Medical Adviser." 1008 pages and over 700 illustrations. This book is sent free on receipt of stamps to cover cost of mailing only. Send 21 one-cent stamps for the paper-bound edition, or 31 one-cent stamps of the handsome edition bound in cloth. Address Dr. R. V. Pierce, Buffalo, N. Y.

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## THE LOST WILL

By Will Allen Dromgoole

### CHAPTER VI.

#### UNCLE BEN TELLS A STORY

HE will was lost; there was no doubt about that. At first there were those disposed to believe the widow had made away with it. But neither Wesley nor Mrs. O'Bryan were of this number.

"She's cross and ill-tempered," Wesley had declared, "but she wouldn't do that."

Nora said to Mike, as the days went by and no trace of the missing document was found, "It's somewhere on the place, Mike; the ould man got maisy and changed the hiding-place, Oi'm thinking. The ould cat isn't in it this time, Mike. Oi've known her a long time; and while she's the temper of the ould boy, she's no vilyun. She's been spoiled and uplifted by the rise of fortune, Mike, but she's no thafe. She niver touched the will. Though Oi'm thinking she'll not trouble herself to find it, nather, Mike."

She was encouraged in this belief by Wesley's story of that last moment at the death-bed of his father.

"He tried to tell me something," said Wesley, when discussing the matter, as he had done a dozen times with the O'Bryans. "Father tried to tell me something when he was dying, but he was too weak; already he was nearly dead. He could only point out the window, and whisper. All I heard was something about the 'bluebirds' cradle.' I think he was already wandering in his mind."

At this little Mrs. Nora would shake her wise head, and declare, as she had done many times already:

"We must make a search, Wesley; we must make a search. The ould cat must slape sometimes, surely."

But the "ould cat" was too keenly alive to the jeopardy of her possessions to do any careless napping at this time, and so far there had been no opportunity for Mrs. O'Bryan to carry out her threat of going over and making a search for the lost paper.

As to going over when Mrs. Womack was at home that wasn't to be thought of. For since the discovery of the plot to get the attorney into the house Mrs. Womack had cut her little Irish neighbor dead. Or if she mentioned her at all it was as "that little fitted Nora O'Bryan."

And so while they wondered, waited, hoped and almost despaired the summer ended. The cotton-bolls rounded, filled and cracked like brown shells, then waited for the October frosts to open their parching pods to the white treasure secreted there. They came at last, the rare October days, and the brown pods burst, disclaiming the proud secret of nature's bounty. The cotton hung in soft white masses, among which skilled ebony fingers were busy through the long autumn days.

The big splint baskets waited at convenient distances along the line of stalks where the pickers were busy at work. Ever and anon the baskets were lifted to stout young shoulders and carried away to the "cotton-house," to be weighed and returned again for a new filling of the glorious southern product.

Even the little piccaninies were at work; for the pickers were paid by the amount of cotton picked, and the piccaninies' fingers were not to be despised. Their voices, singing as they worked, floated up from the fields, mellow and soft and full of a rhythmic sweetness, for nobody works with a more cheerful heart than the southern negro. Wesley heard the singing as he sat on the back door-step of the farm-house, melancholy and despondent, one morning in October. They were singing the old negro ballad, "Massa in de cold, cold ground," and as he listened the tears rolled softly down the boy's cheeks.

He could hear Sam's voice, louder than all the rest; for Sam was the champion singer among the colored people.

Beyond the cotton-field Wesley could see the trees in the river wood; they were clad in the trappings of autumn—scarlet and gold and purple. The wild grapes, he knew, were hanging in purple clusters from some of those same trees; the golden persimmon was dropping its honey free to the opossum and the wild coon. It was a glorious day for the woods, and Wesley had an engagement with that same dusky singer whose voice was floating up from the cotton-fields.

But Uncle Ben's word was law in that field, and the singer knew he must get out his hundred pounds before he could hope for the freedom of the forest. The boy on the door-step knew that the boy in the cotton-field was making all possible haste, yet he found the time hung heavy. There was not a soul to speak to, for his stepmother seldom noticed

him now. She had become strangely grim and silent of late, and while she did not mistreat him, she left him gloriously alone.

Finally the loneliness became unendurable, and he got up, stretched himself, and went down to the field where the hands were at work. Uncle Ben saw him coming and beckoned him; the negro's contract would end with the ending year, and as he had resolved to leave at that time he also resolved that he would tell what he knew of the midnight vision in the old spring-house. He had kept silence all these months because he was bound to Mrs. Womack for the year, and he had no desire to make his path harder than necessary.

Wesley had never lost the hold he had taken upon the old man's affections; there was a strong friendship between them. The negro saw that the boy had been crying.

"What's de matter, 'son?'" said he, in the kindly tone one often hears among these old family servants. "Hab she been mistreatin' ob you?" nodding toward the house, where Mrs. Womack was busy with her preserving. "Hab she been mistreatin' ob you?"

"No, sir," said Wes. "But oh, Uncle Ben,



"NORA IN THE LOFT OF THE SPRING-HOUSE"

we are going away soon! We are not even going to wait until the crop is in. She told me so last night. She is going to move to town into the house there, and rent the farm; and at the end of two years allowed her for winding up the estate she is going to sell it, if the lost will isn't found in that time. She says she believes that father destroyed the will after he made it, and has persuaded her lawyer to think the same. Even Mr. Brewer thinks so. And if it isn't found she is going to sell the place and invest the money in town. Sell father's farm! Oh, Uncle Ben—" And Wesley buried his face in his hands and cried as though his heart would break. "I shall never see the woods and the cotton-fields again, and the place will go to strangers, and I shall be homeless, and—I—wish—I—was—dead."

But Uncle Ben wasn't nearly so sympathetic as Wesley had fancied he would be; in fact, something very like pleasure shone in his black face as it was lifted for a moment from the half-filled cotton-basket.

"Ugh!" said he. "Gwine sell de place, am she? Hi, yi! Dat's rushing things mightily, ain't it, little marster? Neber mind, son, don't you cry; don't you be frettin'; old Ben gwine hab a say so in dat sale, mebbey."

Wesley looked up in amazement.

"Uncle Ben—"

"Yes, sah, I knowed dat what you gwine say. But de place ain't sold yet. Ol' Ben ain't say much, but he got a long head on him, an' he got to stay here till de crap's in. Now, little marster, you just keep de still tongue an' let Uncle Ben do de talkin' an' de thinkin'. You just go 'long an' he happy in

de woods like de little 'possums an' de coons what don't keer if de school keep or no. You, Sam!"

The boy lifted his head, barely visible above the tall cotton-stalks.

"Why don't you come 'long here, sah, an' help dis chil' tree dat coon in de grape-vine, like you done promise?"

Sam showed his ivorys an instant, then his eyes, white and gleaming; then he turned a somersault down the cotton row, gave one unearthly yell, and shouted:

"I'm done ready fur de ol' coon."

As they started off in the direction of the woods Uncle Ben called Wesley back.

"Is yo' ma gwine to town to-day, son?" said he, in a half whisper.

"No, sir; she is going to-morrow, though, to make out the rent papers. She told me I had to drive her in, in the surrey."

"Eh, heh; eh, heh!" Then, after a short silence, "Dat coon gittin' mighty fat on dem grapes, I reckon."

Wesley required no further dismissal; a moment later he was racing off to the woods with his dusky companion, and old Ben was again bending over the cotton-stalks.

At sundown the pickers shouldered their baskets for the last time, and trudged away to the cotton-house. The boys came back from their coon-hunt empty-handed, as they had gone, except for a plentiful coating of crimson grape stain and a modest supply of brow dirt.

As Aunt Jane, with sleeve tucked up, bent over the meat-barrel, Uncle Ben said, "Knock me up a bite right peart, ol' woman; I've got a little business to see 'bout to-night."

learned to bide his time. So he sat in the corner smoking his pipe and waiting for the storm to break. It came sooner than he expected; Mrs. Nora rammed her needle into her thumb, and that settled it; the secret was out.

"Sure," said she, "and I hope the ould cat's satisfied at last. Riding off to the town to-morrow to rent the dead man's farm and to look after getting a house there for her own use. Administrator, is it? Sure and she'll be administering on some other idiot of a man in no time, and you mind what Oi'm saying, Mike O'Bryan. And to think of the poor b'y, with the mother of him in the ground, administered clane out of his own already. I could just wish—"

"Hist!" said Mike, a finger of warning uplifted. A step sounded upon the walk, a shuffling, uncertain, careful step, that crept across the porch and stopped at the door. A moment, and the step was followed by a timid, low knock.

"Come in with you," said Mike; and old Ben, dropping his hat on the door-step, entered.

His face wore such an uncertain, half-frightened expression that Nora was for a moment startled.

"Is something the matter over at the farm, Ben?" she asked, remembering the wicked wish that had been trembling upon her lips when Ben's step first sounded upon the walk.

"No, mistiss," said Ben. "Dey ain't nobody sick; I hab just come ober here, mistiss, to speak wid you a minute."

"Well, if it's no secret just take the chair by the door and spake on, Ben," said Nora.

But the negro still stood, fingering the sleeve of his old coat, and hesitating.

"Mistiss," said he, "but—but it am a secret."

Nora rolled her sewing into a bundle and tossed it into the work-basket.

"Out with you, Mike," said she. "Uncle Ben's got too much sense in the ould gray head of him to be spaking foolishness with me. Out with you, ould smoke-stack," and Mike, not willingly, was hurried out of the room.

"Mistiss," Ben began, slowly, feeling his way carefully, "de mistiss up to our place an' gwine to town to-morrow."

"Yis," said Nora, "so the b'y told me. If she's got the proper toll the road's otherwise free, Ben."

"So't am," said Ben. "Mistiss, she's gwine rent de place next year."

"If she foinds the rinter," said Nora. And then there was another pause, during which Ben studied the face before him, and Nora pondered the nature of the errand upon which her visitor had come.

"Mistiss," said Ben, at last, "I done learn long 'go to mind my own business." Nora nodded. "An' I know it ain't no use fur a nigger to go meddlin' in white folks' affairs."

"Mighty foine wisdom dat, Ben," said Nora; and Ben went on, growing bolder as he saw Nora was not lacking in discretion herself.

"An' mostly," said he, "I tends to my own business, an' I don't meddle; an' I sticks tolerable close home, an' holds my own tongue, an' keeps my own 'pinious to myself."

Nora said nothing; her heart was thumping like a small hammer in her bosom, and she was impatient for the old man to go on with his story. He leaned forward, looked her full in the honest Irish eye, and said, solemnly, as though demanding the earnest truth of her:

"You's a friend to dat little boy up yonder?"

"Yis," said Nora. "I am; if it's anything to help the b'y you can go on."

"Mis iss," said Ben, "It's just a nigger, and niggers sometimes git in trouble wid dey tongues. You'll rickerliet dat, I reckon?"

Nora waived the question with a motion of her hand.

"Go on," said Nora. "Oi'm no fool. Besides, there's a heart in the bosom of me."

"Mistiss," said Ben, "the night ob de big storm last spring my ol' woman see a ghost. Somethin' white met her in de path an' run an' hid itself in de ha'nted spring-house. She come runnin' back home; but I follered dat ghost. It went inter de old crackly boards an' I peeped through de old crackly boards an' I see it plain as I see you dis minit. It clomb de loft ladder, wid somethin' white in one hand an' a burnin' candle in de udder. An' den it come down ag'in in a minute, an' de han' dat held de white somethin' was em'ty; an' it was ol' marster. But, mistiss, wait—"

For Nora, with starting eyes and cheeks aflame, had half risen.

"You better not tell ol' marster out dar. It ain't no use to drag nobody else into dis, an' too many tongues ain't good for a secret. I wants to just tell you dis much more. Bluebirds builds dey nests in hollows ob ol' stumps an' rotted timbers, posts an' sech; an' whar dey raise dey young-uns might be called de 'bluebirds' cradle.'"

With one big warm impulse of her Irish heart Nora reached out her hand and clasped the black hand of faithful Ben.

"Marster know," said Ben, "dat ol' miss an' all de rest ob de place, exceptin' mebbey ob me, was afeard ob dat ol' ha'nted spring-house. An' dat's how come he went dar. But I'm 'bleeged to tell you de place hab done sink in ag'in; de ol' ladder am just a-hangin', an' dey ain't no safe way ob climbin' up dar now, sholy."

But Mike, too, had had experience; he had

Nora's face fell; perhaps if the will had been concealed in the ruin some one had removed it, after all. Or perhaps it would be impossible to climb the old ladder now.

"Well," said she, "we'll see; we'll see. The old cat goes to town to-morrow."

#### CHAPTER VII.

##### HUNTING THE BLUEBIRDS' CRADLE

Mrs. O'Bryan declared she had "been hugging the widow for two hours," watching for Mrs. Womack to pass on her way to town.

At ten o'clock there had been no sign of her. Mrs. O'Bryan imagined many things that could have detained a busy farmer's widow in cotton-picking time, and she also imagined many foolish reasons for her neighbor's delay. Once she fancied she had grown suspicious and had given up the trip. Then she concluded she had found the will herself, or that Ben had reconsidered and confessed what he knew about it. For little Mrs. Nora could be as impatient as the best when she had a great scheme in hand.

She had sent Mike off to the field with instructions to "kape clear of the house until the farrow-hell should sound the dinner-time." And whatever made her add she never could have told, but she did add this:

"If it doesn't ring all the day, just stay away all the day, you curiosity-box, and trust your wife to know what she's a-doing of the while."

"For," she told herself, when Mike had gone, "I'll not be after dhragging the old man into my schrapes. If there's any blame to come of it the same shall be mine. If there's any glory, why, Mikey, we'll wrap both the heads up us with the halo."

So Mike went off to the field, not dreaming that Mrs. Nora was going to venture into the very lair of the lion over the way. When he was out of sight little Mrs. Nora put on her sunbonnet and took her stand at the window to see when her neighbor should go by.

The widow, however, was taking her own time this morning. It was ten by the kitchen clock before the surrey went by, a bundle of black on the back seat, and Wesley faithfully tugging at the reins on the front.

Plotting little Mrs. O'Bryan drew further back into the shadow of the room.

"She'll get wind of it," said she, "if she catches the flap of my bonnet-tail. And faith, the old cat ain't to be fooled with fits the second time." And at the recollection of the "fits" Mrs. O'Bryan went off into laughter that must have reached the ears of Mrs. Womack herself but for the noise of her own carriage-wheels.

Then when the carriage made the bend in the road Mrs. O'Bryan turned the key in her own door and went tripping across the fields in the direction of the Womack place.

"For," said she, "what's to be done this day must be done quickly, Nora O'Bryan, and no-o foolishness."

The "foolishness" referred to the spring-house ghost, of which she had heard much.

"Not that Oi'm afraid of you," said she aloud. "Not that Oi'm afraid of you, don't be thinking it, you raw bones of a banshee."

Yet when she reached the silent, empty farm-house a certain feeling of awe that was not unlike fear did take possession of her. She glanced over her shoulder many times while crossing the yard to the spring, and was half sorry already that she laid down such emphatic instructions regarding the ringing of the farm-bell. Poor, plucky, big-hearted little Nora. She was destined to regret those regulations many times before that day should come to a close.

"Mike'll uiver lave the field till he hears the hell," said she; "not if it hangs there over the kitchen roof until the morrow morn, dumb as a frog in the dog-days."

Then she thought of the lonely little figure occupying the front seat of Malviny Womack's surrey, and took courage.

"He'll be her driver and her nager all his life," said Nora, "unless the paper's found, for sure, now."

And thinking of the boy her courage came back, and she passed on until she stood at last under the shadow of the great drooping roof, the eaves of which were resting on the ground on that side where the earth had caved in. She shuddered as her ear caught the hiss of the deep dark water in the underground spring, breaking a passage for itself, through its unexplored caves, to Stone river.

But she pushed bravely on until she had really passed in and had begun the descent of the rocking old stairs leading to the water below. How black it was down there, and how far down it seemed with that one little round glisten of blackish water shining in the midst of the gloom!

"Sure," said Nora, "and it's fit for a banshee's bed. Murderers, banshees, ghosts, haunts, the devil himself, for all anybody can tell, with the black eye of you shining up out of the blacker pit below. But you'll not be scaring Nora O'Bryan, no; don't you think it, you."

She stopped for a moment, however, on the little break or platform, for a long time looking around her, allowing her eyes to become accustomed to the gloom, and studying the formation of the cave and the old ruined cover. At her right hand stood the shaky old ladder, one end resting on the platform, the other lost among the dust and cobwebs of

the loft, forsaken long ago save by the bats and gophers and such unsightly things as cared to take up an abode there. She laid a hand upon it, meaning to count the number of missing rungs, when there came such a whirl of dust, mingled with a rush of wings and rattle of scurrying feet, that the intruder at the foot of the ladder gave an involuntary scream and clapped her hand upon her lips.

"It's only the bats and the rats getting away," she told herself; "but faith, it might have been the banshee, for all the uncouth sound of it."

And then, still shaking, but with lips set tight and hard, brave little Irish Nora set her hands upon the lower rungs and slowly began to climb the rickety old ladder. She was conscious, as she climbed, of voices in the air—a sound of singing, far off and muffled by distance. She recognized it as the song the hauds were singing over in the cotton-field, and it gave her courage, in that it urged a human presence not so very far away that it might not mean safety.

The ladder sloped slightly with the sloping roof, the upper end resting against that side of the roof that was elevated by the caving in of the old structure. Nora noticed this with a thankful heart.

"If it falls," said she, "Oi'll fall on top of myself, at least," and with a smile for her own wit she pulled herself up, and up, until at last, with a deep sigh of thankfulness, she stood clear of the shaky old ladder, in the dust of the old, old loft, the secrets of which she had come to explore.

"Saints he praised!" said she, "And now for the 'bluebirds' cradle.'"

For more than an hour she prowled among the dust of half a century, the cobwebs that were black as the old timbers themselves, and the beds of young mice; but there was no sign of the missing will. More than once a lizard crossed her foot, and more than one solemn-eyed gopher glared at her from a hole in the rotted timbers. Young rats and mice scurried about, and sometimes a bat brushed her cheek; but she had ceased to fear them. Indeed, she scarcely saw them, so intent was she on finding the bluebirds' cradle and its treasure.

But though she found many a hole in many a bit of gallant old Tennessee cedar that had stood the wear and weather of five cycles, many an empty nest where Madam Blue had mothered her young and sent them out into the world of men, methods, and of worms, there was no sign of the lost paper—nothing to mark the recent occupants' presence save the forsaken nests; a feather, which perhaps Madam had lost in a family discussion with Monsieur Blue, or a bit of broken shell where the little Misses Blue had made their debut into the great world. Nothing, absolutely nothing in any way relating to the lost will.

She searched until her arms ached, and her eyes and hair and throat were filled with dust. And at last, heartsick and weary and disgusted, she gave it up. And when she gave it up poor, pretty, plucky little Mrs. Nora sat down among the heaps of rubbish and burst into tears.

"The poor b'y!" she sobbed. "And it's for him intirly I am making a coon of myself, climbing among rafters and prowling among banshees, and gophers, and bats, pretending fits, and all that. It's for him intirly, and sure it must not fail."

And just then big-hearted, little-bodied Irish Nora hethought herself of a prayer, crossed herself, and got upon her knees. Perhaps Mr. Rat looked on; perhaps a stray bat brushed her with its wing, and wondered; even a banshee might have looked in through the cracks of the old roof, but it mattered nothing to Nora, busy at her prayers. Then she got up, drew in her breath, and began it all over again.

"Now," said she, "it's business Oi'm m'an-ning; and to make sure Oi'm not skipping Oi'll begin at the first post and go over all, ivery one of them."

But that was not so easily done as said; the first "post," as she called the long upright beams that had once supported the old roof, chanced to be high up, away out of reach of Mrs. Nora's prying little finger. She didn't like the looks of the spider-festooned old weather-boarding at the top of which the rotted hollow beam protruded full two feet beyond the wall. She was not afraid of the wall giving way; she was light, and she argued, furthermore, that if it supported a man, as Uncle Ben had testified it had done, it would support the weight of a very small, slight woman.

"Oi'm not minding the wall," said she; "but what Oi'm dreading is the baste of a spider that might be lurking in last century's filth."

She had quite made up her mind, however, to look into every "post;" and this identical beam had somehow a look of importance. She felt sure it contained the very thing for which she had been searching the last hour and a half. So, buckling her courage on, so to speak, she clenched the boards with the ends of her fingers, and slowly began to draw herself up. Higher and higher, but slowly, cautiously, every nerve awake, heart on her tongue, head awhirl, frightened half to death, yet still wondering vaguely, and almost without knowing it, why those little clotted cakes of mud should be on the wall, and why they kept peeling off as her fingers touched them.

Suddenly a thought came to her like a flash; so sharp and sudden and altogether full of meaning that she gave a startled cry that was half fear, half delight, and began to climb faster. Faster and faster yet; that mud meant a recent presence; other feet that had climbed where hers were climbing. The old board tottered and creaked; the old beams swayed and rattled; but she went on up, and up, and up, until her head touched the top of the beam she sought. Then, reaching out her hand to thrust it into the rotted hollow end of the protruding cedar, her foot slipped, and she swayed, caught at the rickety old timber, when there came a fearful lurch, a jar, and she was floating in air for a moment; the next there came a crash, a hiss of black water in her ears, then all was darkness.

The old ruin had fallen under the light strain, dragging its decayed supports with it. And under the ruin of dusty old timbers lay Mrs. O'Bryan with a knot on her head and the breath gone from her body.

(To be continued)

#### WHEN A SQUIRREL IS SHOT

When a squirrel is hit in full leap from one tree to another, unless the shot be instantly fatal, the momentum of the jump will frequently carry it to the branch that it has aimed at, and there it will make a desperate effort to cling, letting go very slowly.

In most cases where squirrels are shot out of tree-tops with the ordinary shotgun, the fall is not instantaneous; the creature will cling where it is for a moment or two, or will run along a limb, maybe with an unsteady gait, and will frequently attempt to leap to another tree. If the squirrel is badly hurt, this leap will be a failure, and in gathering up its strength for the effort, it will have expended its force, and will begin its fall at mid-distance. When struck from a limb, it will cling first to the top, and then to the side, loosening its hind feet first, holding desperately with its fore feet when all the rest of its body has swung loose, and cling there till its strength is gone, when it will fall to the ground dead.

When the force of a shot has struck a squirrel off a limb quickly, it will grasp at branches and twigs in its descent, and sometimes be able to recover itself, and even to mount a second limb and begin running over the tree again.

When a squirrel is struck on the ground, if not fatally hurt, it will run for the nearest tree and mount it. Then it will leap from tree to tree, seeking for one that contains a den for refuge. It is remarkable how much ability to leap may be left in a strong squirrel after it has received a wound that, in a few minutes, will be fatal. It will leap from limb to limb, causing them to sway with its weight, and may cover the tops of half a dozen trees before its departing strength makes it relax its grasp and fall to the earth.

When a squirrel has been shot out of a tree, but only slightly wounded, it will alight upon its feet, and instantly begin to run. The constant bombardment of a den tree will sometimes so terrify the occupants of the den that they will rush out and make for other trees; or if a strange squirrel is chased into a den tree where it does not belong, a quarrel immediately begins between it and the occupants, and the weaker will speedily come forth.

The squirrel makes a vigorous battle for life, uses every effort to run and to hide, and will bite sharply when it has no other resources.—Lippincott's Magazine.

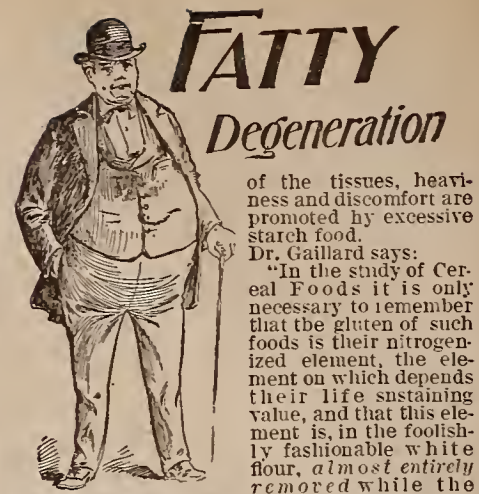
#### THE WEALTH OF OUR COUNTRY

The wealth of the American people to-day surpasses that of any other nation, past or present.

The development of the intellectual and industrial power of the United States has in the last seventy years been stupendous; yet our immediate concern is not with that, but with the marvelous growth in the wealth of the country. The census taken in 1820 showed the wealth of the United States as \$1,960,000,000, or an average of \$205 for each head of the population. Seventy years later, to take the full length of human life, the return was \$65,037,000,000, or \$1,039 per inhabitant. The rate of increase has not been uniform throughout the period mentioned. In the first interval of twenty years our country doubled its wealth, in the second it was quadrupled, but in following years, although the increase of wealth per head was unprecedented, the rate of geometrical progression was much less.

From 1821 to 1840 the average annual increase was about one hundred million, or a little over seven dollars and a half per head of the population; in the next twenty years it was about six hundred and thirty-five million, or nearly thirty dollars per inhabitant; from 1861 to 1880 the annual increase was nearly one billion three hundred and seventy million, or over thirty dollars per inhabitant.

These figures are startling enough, but in the last decade of our seventy years the accumulation has been still more marvelous, the average annual increase being over two billion two hundred and twenty-five million, or about forty dollars per inhabitant.



of the tissues, heaviness and discomfort are promoted by excessive starch food.

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Diamond Dyes are prepared specially for home use, with very simple directions, so that it is but little trouble or work to use them. A direction book will be sent free to any address. WELLS, RICHARDSON & Co., Burlington, Vt.



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THE CORN-SONG

Heap high the farmer's wint'ry hoard!  
Heap high the golden corn!  
No richer gift has autumn poured  
From out her lavish horn!

Let other lands, exulting, glean  
The apple from the pine,  
The orange from its glossy green,  
The cluster from the vine.

We better love the hardy gift  
Our rugged vales bestow,  
To cheer us when the storm shall drift  
Our harvest-fields with snow.

Through vales of grass and meads of flowers  
Our plows their furrows made,  
While on the hills the sun and showers  
Of changeful April played.

We dropped the seed o'er hill and plain  
Beneath the sun of May,  
And frightened from our sprouting grain  
The robber crows away.

All through the long, bright days of June  
Its leaves grew green and fair,  
And waved in hot midsummer's noon  
Its soft and yellow hair.

And now with autumn's moonlit eves  
Its harvest-time has come,  
We pluck away the frosted leaves  
And bear the treasure home.

There, when the snows about us drift,  
And winter winds are cold,  
Fair hands the broken grain shall sift,  
And knead its meal of gold.

Let earth withhold her goodly root,  
Let mildew blight the rye,  
Give to the worm the orchard's fruit,  
The wheat-field to the fly.

But let the good old crop adorn  
The hills our fathers trod;  
Still let us, for his golden corn,  
Send up our thanks to God.

—John G. Whittier.

CHILDREN WHO HAVE RULED THE WORLD

Spain is always the land of the infante. To-day it is the kingdom of an infant, just as it was sixty-five years ago, when the king's grandmother, Isabella II., ascended the throne at the age of three, assuming the actual government when she was thirteen. Curiously enough, at that time both parts of the Iberian peninsula were ruled by little girls, and both were in touch with the American continent, inasmuch as Brazil was in keeping of a little boy, poor Pedro II., then aged eight. The road these three children had to travel was as hard as Alfonso XIII.'s. Isabella's path was specially thorny. Her mother, Maria Christina, shocked the grandees of Spain by contracting (in 1833) amorganatic marriage a few months after the death of her husband. She plotted and planned to marry Isabella, who ultimately wedded her cousin, Francisco de Assisi. Maria ultimately had to go to France (in 1854), and Isabella was expelled to the same country in 1868, abdicating two years later in favor of her son, Alfonso XII., the father of the present boy king. Maria of Portugal also found life a worry. Her father, Dom Pedro IV., abdicated in her favor in 1826, when she was seven, keeping Brazil for himself and his son, Pedro. Maria, who was born in 1819, should have married her father's brother, Dom Miguel. But she didn't. She espoused first the Prince of Leuchtenburg and then Prince Ferdinand of Saxe-Coburg, cousin of our own Prince Consort, and the grandfather of the present king of Portugal. As a matter of fact, Miguel managed to hold the throne for six years (1828-34), but Maria was ultimately restored in the latter year (in which, by the way, her father died), and reigned until her death, in 1853. Her brother Pedro, whom she replaced in Portugal, and in whose favor her father resigned the crown of Brazil, was a charming man, but he was an anachronism, for the Brazilians drove him out in 1889, and he died of a broken heart two years later.—English Illustrated Magazine.

CHINESE LAW-COURT

For a peaceful people the Chinese appear to be a most litigious race. The moment that a quarrel begins to become serious one or the other of the parties is likely to shout, excitedly, "I will go to the city!"—that is, to present his formal accusation to the yamen. The other side threatens the same, and while in a large percentage of cases outsiders contrive to suppress the immediate execution of the menace, every one recognizes that the trouble is only temporarily patched up, and may break out in an aggravated form at any time. If the accusations presented in Chinese courts were confined to anything like the facts in the case there would be no case at all for nine tenths of them. Therefore, it is considered indispensable to blend with the real grievance from seventy to ninety-five per cent of fiction. The plaintiff does this as routine practice. So does the defendant. When the magistrate happens to feel in a good humor he calls up the case, or quite as likely he does so when he is in a very bad humor, which hodes ill for one side, and not infrequently for both. The first part of a Chinese trial is likely to be something like the proceedings in one of our own courts—a great deal of formality and an apparent respect for the majesty of the law and especially for its representative, the district magistrate, who is the Chinese unit of government. But it is

not long before all resemblance to Occidental procedure fades into thin air. There are no lawyers to protect the clients. If there really is any law bearing on the case in hand, no one but experts such as the yamen secretaries knows what it is. The magistrate is himself civil and criminal judge, jury and practically the appellate court. There is no manner of restraint upon him in his mode of asking questions, in the subject of his inquiries or in his treatment of the principals or witnesses. The greater part of the matter brought into a Chinese lawsuit would be entirely ruled out of any British court as totally irrelevant to the main issue. But in a Chinese case there often is no main issue, or issue of any kind, except the impatient shout of the official, "Get out with you!" (hsia-ch' u la), whereupon all the parties retire, and not improbably not one of them has the smallest idea where the case has now got to. Neither, perhaps, has the magistrate, but for the time he has had enough of it, and wants to smoke a pipe or two of opium, and will hear them again when he has a more convenient season. But before the case has been dismissed the respective parties have by no means been idle. Each of them has told falsehoods enough to shock a company prospect-maker, and as each party delivers himself of these fabrications the other finds it impossible to restrain himself, and hoarsely bawls, "That is a lie!" To this it is necessary to reply, which is done with a volubility greatly in contrast to the quiet of the preliminary stages, when each replied in a few monosyllables only. From ejaculatory interruptions, giving the other party the lie, it is but a stage to angry colloquies of some length, in which each party struggles to be heard, each reviles the other vociferously, and neither party is interrupted or reproved by the magistrate, who is now engaged in the process of making up his mind on the basis of what he sees and hears as to which side has the most of li, or reason. In the worst stages of a case it often happens that the magistrate himself does the reviling, and it also sometimes occurs that the worsted party in the suit reviles the magistrate, although this is rash, for he may beat them severely for so doing, and then decide the case against them.—North China Herald.

VALUE OF A SPECIALTY

A youth took, as he expressed it, the notion into his head to investigate the peculiarities of a certain plant. Not very much was known of it save that it was thought to have possibilities as a commercial product for future use. He studied and read about it, cultivated it, and, according to his friends and playmates, wasted valuable time on it. After a time public attention was turned to this plant. No one seemed to know very much about it. When it was reported to the commissioner, whose business it was to make scientific experiments with it, that there was a young man, little more than a lad, who had paid some attention to it, the boy was sent for and catechised as to his information on the subject. So extensive was his knowledge of this new product that he was appointed to go abroad with the commission and study the plant upon its native soil. Here was the moment, and the man was ready. This is the history of many of the brightest and most successful men of our time. They did not know at what moment certain facts might be required, but they carefully stored away such knowledge as was likely to be of use to the world at some future day.—New York Ledger.

GLADSTONE'S NICKNAMES

A collection of the nicknames that were from time to time conferred upon Mr. Gladstone would be a fine dictionary of epithets alike of love and dislike. Besides such perennials as the Grand Old Man, "the G. O. M." and the People's William we recall the Franchise Bill, the Pope of England, St. William the Woodcutter, the Mahdi of Midlothian, the Old Parliamentary Hand, the People's Will. Mr. Merrypebble, the Ancient Senator, Yonart the Man, Hawarden Bill, Prime Billy, W. G., the Only William and the Old Gentleman. At one time his name was a favorite theme for Christmas charades, among which may be remembered the following elegant outburst of a Conservative wit: "I should be my first, if I could throw my second at my whole."

THE HOUR-GLASS CLOCK

A novelty in a clock is announced which has no special merit except as a curiosity. The object of new invention in the clock line is to avoid frequent winding, while at the same time maintaining the regularity that constitutes the chief value of a clock. This device is somewhat on the hour-glass order. It registers the time accurately by the running of the mercury from one end of the glass to the other. The clock is built in two sections, and an indicator marks the precise time consumed by the mercury in passing from the upper to the lower. This clock must be turned when the upper section is emptied, which is really about as much work as winding the clock.—The New York Ledger.

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No money required. We send the Bluine at our own risk. You go among your neighbors and sell it. Send us the money that you get for it and we send you the Watch, Chain and Charm, prepaid.

*This is an American Watch, Nickel-Plated Case, Open Face, Heavy Bevelled Crystal. It is Guaranteed to keep Accurate Time, and with proper care should last Ten Years.*

**BLUINE CO., 392 CONCORD JUNCTION, MASS.**



THE MESH AROUND THE PANEL SHOWS HOW THE FENCE IS MADE.

## PERFECT FARM FENCE

Made of best doubly annealed galvanized steel wire. Top and bottom wires No. 9. All other wires No. 11. We use the strongest stay wire in any woven wire fence on the market. — Hence more strength and durability. Our **LOOP KNOT** (entirely new feature, patented), provides perfect expansion and contraction and keeps it tight at all temperatures. Our **LOOP KNOT** being uniformly distributed throughout each foot of fence is, in effect, the same as placing one coil of a spiral spring in every foot throughout the entire length of fence, **RESISTING GRAVITY STRENGTHENING IT.** Our Loop Knots make the fence plainly visible and impossible for stay wire to slip or give. It is **Hog tight and Bull strong.** Will turn all kinds of stock without injuring them. Where we have NO AGENTS a **LIBERAL DISCOUNT** will be given on introductory order. Reliable farmer agents wanted in every township. Send for catalogue and prices.

**PITTSBURG WOVEN WIRE FENCE CO., - PITTSBURG, PA.**



Is all it costs For wire to make

## 9c. TO 19c. A ROD

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With our all Steel Automatic Machine Capacity 70 Rods per day. We sell Galvanized fence, Barb, Baling wire, and our Famous High Carbon Coil Spring Wire. Twenty different styles of Yard, Lawn, church, and cemetery fences. Farm fence in the roll. Farm and yard gates, the best and strongest steel line and anchor posts made, in fact all kinds of fence supplies direct to the consumer at the very lowest Wholesale Prices. Write for our Catalogue and price list and save the middleman's profit.

**KOKOMO FENCE MACHINE CO., 220 NORTH ST. KOKOMO, IND., U. S. A.**




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THE BEST IS THE CHEAPEST.

The celebrated "DeLoach" Patent Variable Friction Feed Saw-mills are recognized as the standard in mechanical skill. Prices from \$160.00 up. Four H. P. warranted to cut 2,000 feet of lumber per day.

Send for large catalogue of Saw-mills, Shingle-mills, Planers, Grinding-mills, Baling-presses, Water-wheels, etc. **DELOACH MILL MFG. CO., 300 HIGHLAND AVE., ATLANTA, GEORGIA.**



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10 CENTS pays for our great Combination Package mailed to any address: Containing beautiful rolled Gold Ring, one Flag Scarf Pin, one picture U. S. S. Maine, 6 colored Vignette Pictures, one gold plated Watch Chain with Charm, one fine Rose Pin, one Cornline Neck Chain, one flower Breast Pin, Gold Pl. Stud, one Bird Whistle, one Colorado Gold Pen, one Clover Leaf Pin, one Stone Set Ring, one Parlor Game with 10 Cards, one Pearl Top Scarf Pin. All these new and beautiful articles mailed, postpaid, with prize coupon for only 10 cents silver or stamps. Address, **BUCHANAN & CO., Box 2628, NEW YORK.**

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Our offer fully explained in Farm and Fireside October 1st, November 1st and 15th.

## AND PREMIUMS.—FACTORY TO FAMILY

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A big package of beautiful Silk Remnants, from 120 to 150 pieces, all carefully trimmed, prepared from a large accumulation of silks especially adapted for all kinds of fancy work. We give more than double any other offer, and the remnants are all large sizes, in most beautiful colors and designs. With each assortment is four skeins of the very best embroidery silk, assorted colors. Send 25 cents in silver or stamps to **Paris Silk Agency, Box 3045, N. Y. City, N. Y.**



## SMILES

## HE WORRIED ABOUT IT

"The sun's heat will give out in ten million years more."

And he worried about it.

"It will sure give out then if it doesn't before."

And he worried about it.

It would surely give out, so the scientists said

In all scientific books he had read, And the whole mighty universe then would be dead.

And he worried about it.

"And some day the earth will fall into the sun."

And he worried about it.

"Just as sure and as straight as if shot from a gun."

And he worried about it.

"When strong gravitation unbuckles her straps,

Just picture," he said, "what a fearful collapse!"

It will come in a few million ages, perhaps."

And he worried about it.

"The earth will become much too small for race."

And he worried about it.

"When we'll pay thirty dollars an inch for pure space."

And he worried about it.

"The earth will be crowded so much without doubt,

That there'll be no room for one's tongue to stick out,

And no room for one's thoughts to wander about."

And he worried about it.

\* \* \* \* \*

"And in less than ten thousand years, there's no doubt."

And he worried about it.

"Our supply of lumber and coal will give out."

And he worried about it.

"Just then the ice age will return cold and raw,

Frozen men will stand stiff with arms out-stretched in awe,

As if vainly beseeching a general thaw."

And he worried about it.

His wife took in washing—a dollar a day—

He didn't worry about it;

His daughter sewed shirts, the rude grocer to pay.

He didn't worry about it;

While his wife beat her tireless rub-a-dub-dub

On the wash-board drum in her old wooden tub

He sat by the stove and he just let her rub.

He didn't worry about it.

—S. W. Foss, in Yankee Blade.

## CURING THE MULE

I was riding along a mountain road in East Kentucky, when I saw a mule running toward me with a singletree dangling at his heels. With great difficulty I succeeded in getting out of his way, and he continued to go down the mountain at a lively pace.

About a mile further on I saw two front wheels of a spring-wagon, and a short distance away the other wheels and the wagon-box. I looked around to see if the driver had been hurt; but finding no one I drove on. In a few minutes I met a man walking rather quickly down the road.

"Stranger," he asked, "did you see a mule down that road?"

"Yes."

"Did he hev a rag over his year?"

"I didn't see any."

"Waal, it's all right. I reckon 'e'll stop when 'e gets flustered out, an' I reckon 'e's cured."

"What is he cured of?" I asked.

"Balkin'." You see, I heard that a grass-hopper put in th' year o' a hoss or mule'd cure 'im from balkin'. So I tied a rag over the critter's year so it couldn't get out, cotched a grasshopper, put 'im in, an' stranger, it's the best remedy I ever seed. Th' mule didn't give me no time to get in th' wagon. I never seed a mule so sprightly. I reckon the hopper's got out now, an' I'll go and cotch the mule."—Washington Star.

## SEEING IS BELIEVING

Freddy's mama had a caller one day, who several times during her stay said, "Now I must go," always resuming her seat, nevertheless. Upon another repetition of the remark, Freddie said, solemnly, "Don't you believe it until she's gone, mama."—Indiana Witness.

## A STREET-CAR INCIDENT

A man with an incipient jag hoarded a Gilmor-street car this morning and asked the conductor:

"Does this car go to Highlandtown?"

The conductor did not hear the question, and the man asked, indignantly:

"I want to know, and know quick, if this car goes to Highlandtown?"

The conductor answered that it did not, and that the route mapped out by the railroad officials for him, and which he would take, barring a collision, breakdown or running off the track, was by the Gilmor street way.

The dazed man asked, in a very injured tone, "And don't this car go to Highlandtown?"

"No, sir," replied the conductor.

"Well," said the man, "I'm glad it don't. I don't like Highlandtown."—Baltimore News.

## THE LORD'S PRAYER REVISED

A little United States boy, having been initiated into the methods of government of various countries and earnestly instructed as to the superiority of those obtaining in his own land, thus astonished his mother at prayer-time: "Our Father, 'ch art in heaven, hallowed be Thy name; Thy republic come—mother, I won't pray again for a kingdom!" And he has continued to revise his prayer on these lines.—Toronto Saturday Night.

## THE THREE R'S

A heavy of little children were telling their father what they got at school. The eldest, "Reading, spelling and definitions."

"And what did you get, my little one?" said the father to a rosy-cheeked little fellow, who was at that time slyly driving a ten-penny nail into the door-panel.

"Me? Oh, I got readin', spellin' and spankin'."

## ABOUT THE EXACT TIME

She was in a rush to get her husband's laundry out so he might get it that night.

"How long does it take you people to do up a shirt?" she asked of the meek-eyed driver of the laundry-wagon.

"I don't think it takes more'n about three washin's, mum," he replied, and then she explained to him what she really meant.—Denver Times.

## POPULAR

"Your little Jim seems to be popular with the other small boys."

"Popular? The other day he asked if he could give each of his boy friends an apple, and when I came down-stairs the entire harrel was gone."—Detroit Free Press.

## FULLY RECOVERED

"Has your husband fully recovered from his army experience?"

"Oh, quite. He finds fault with the victrols every day now."—Cincinnati Enquirer.

## BRIGHT BITS

"Mama," said a little boy who had been sent to dry a towel before the fire, "is it done when it is brown?"—New York Press.

"I'd rather be a policeman than a burglar," said Jack. "Burglars have to work nights."

"So do policemen," said Bob.

"Maybe," said Jack, "but they have uniforms and brass buttons, and burglars don't."

"Bobby," cried Tadley to his young hopeful, angrily, "my father used to whip me when I behaved as badly as you are doing."

"Well," answered Bobby, thoughtfully, "I hope I'll never have to tell my little boy that."—Truth.

## GOOD WINTER READING

For farmers in the Eastern States is now being distributed by the Chicago, Milwaukee & St. Paul Ry., free of charge to those who will send their address to H. F. Hunter, Immigration Agent for South Dakota, Room 365, Old Colony Building, Chicago, Ill.

The finely illustrated pamphlet, "The Sunshine State," and other publications of interest to all seeking New Homes in the most fertile section of the West will serve to entertain and instruct every farmer during the long evenings of the winter months. Remember, there is no charge—address as above.

## 22nd ANNUAL ANNOUNCEMENT.

## 1899 Columbia and Hartford Bicycles.

PRICES ON AND AFTER NOV. 1st, 1898.

Columbia Bevel-Gear Chainless, . . . \$75.00  
Models 50 and 51.

Columbia Chain Wheels, . . . 50.00  
Models 57 and 58.

Columbia Chain Wheels, . . . 40.00  
Model 49, 1899 Improvements.

Columbia Tandems, . . . 75.00  
Models 47 and 48 Diamond and Combination Frame.

Hartford Bicycles, . . . 35.00  
Patterns 19 and 20.

Vedette Bicycle { Pattern 21, for Men, . . . 25.00  
Pattern 22, for Women, . . . 26.00

We also have a few Columbias, Models 46, and Hartfords, Patterns 7 and 8, on which we will quote prices on application.

No need to purchase poorly made bicycles when Columbias, Hartfords and Vedettes are offered at such low prices. The best of the riding season is before you. BUY NOW.

POPE MFG. CO., Hartford, Conn.

## ENTERPRISE Meat and Food Choppers

Twenty-eight sizes and styles, \$1.50 to \$275.00

No. 5, Clamps to table,	Price, \$2.00
No. 10, " "	" 3.00
No. 20, " "	" 5.00
No. 12, Screws on table,	" 2.50
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No. 32, " "	" 6.00



FOR CHOPPING Sausage and Mince Meat, Hamburg Steak for Dyspeptics, Tripe, Hoghead Cheese, Suet, Codfish, Coconut, Clams, etc.

For sale by the Hardware Trade. Catalogue Mailed Free.

Farm and Fireside says:

"It is the only Meat Chopper we ever saw that we would give house room. It has proved such a very useful machine that we want our readers to enjoy its benefits with us."

Our trade-mark "Enterprise" is on every machine. Send 4c. in stamps for the Enterprising Housekeeper"—200 recipes.

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\$2.95

## OUR 1899 MACKINTOSH

SEND NO MONEY, cut this ad. out and send to us, state your height and weight, bust measure, length of garment from collar down back to waist line, and waist line to bottom of skirt; state color wanted, and we will send you this mackintosh by express C. O. D., subject to examination; examine and try it on at your nearest express office, and if found exactly as represented and by far the greatest value you ever saw or heard of, pay your express agent OUR SPECIAL OFFER PRICE, \$2.95, and express charges.

THIS MACKINTOSH is made of BLACK or BLUE genuine RAINLEY double texture, waterproof SERGE CLOTH, with fancy plaid lining, velvet collar, double detachable cape, extra full sweep cap and skirt, guaranteed latest style and finest tailor-made. FOR FREE CLOTH SAMPLES of everything in ladies' mackintoshes, write for Free Sample Book No. 85C. Address SEARS, ROEBUCK & CO. (Inc.), CHICAGO, ILL.

THE YANKEE FIRE-KINDLER Builds 100 Fires with 3c of oil. No kindling. War- ranted 3 years. Greatest Seller for Agents. Sample with terms prepaid, 10c. YANKEE KINDLER CO., OLNEY, ILL., 37 St. O.



Cures While You Sleep,

Whooping Cough, Croup, Asthma, Catarrh & Colds.

CRESOLENE when vaporized in the sick-room will give immediate relief. Its curative powers are wonderful, at the same time preventing the spread of contagious diseases by acting as a powerful disinfectant. Harmless to the youngest child. Sold by druggists. Descriptive booklet with testimonials free.

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## Guitar Players

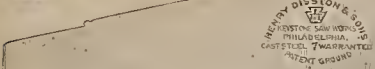
Can learn to play the Guitar to accompany the voice, mandolin or other instruments by getting

HENLEIN'S SIMPLIFIED CHORD BOOK

All play and no work. Sample copy for eight 2c. stamps.

GROENE MUSIC PUB. CO., 32 E. 5th St., Cincinnati, Ohio.

# DISSTON'S



It will pay you to buy a Saw with "DISSTON" on it. It will hold its set longer, and do more work without filing than other saws, thereby saving in labor and cost of files. They are made of the best quality crucible cast steel, and are

FULLY WARRANTED.

For Sale by all Dealers.

Send for Pamphlet, or "Saw Book," mailed free. HENRY DISSTON & SONS, Philadelphia, Pa.

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At Once Send 5 cts. in stamps for our Large Illustrated Catalogue of Holiday Premiums.

THE COMMERCIAL TRIBUNE PREMIUM AND SUPPLY CO., Cincinnati, Ohio.



There are hundreds of sleeping rooms about the country now cold and cheerless, that might be made otherwise by the use of the

### ROCHESTER RADIATOR

with its 120 cross tubes. One stove or furnace does the work of two, and you thus

### SAVE 1/2 YOUR FUEL

if you don't understand it, send for free booklet. Where we have no active agent we will sell at wholesale price to introduce.

Rochester Radiator Co., No. 8 Furnace St. Rochester, N. Y.



WHERE IT SHOULD GO.



A washerwoman living in South Bend, Ind., had for a long time suffered from dyspepsia, until one day she gave Ripans Tabules a trial. Her own statement of the result will be of interest to other dyspeptics: "From the very first day," she said, "I felt less misery in my stomach, and when the first supply was gone, I went to the druggist and got more, and have been using them ever since, and very thankful I am to know about them, for I had tried so many things and herbs and doctors without getting any better. I had about given up getting anything to help me, but to-day I can eat quite a large meal and feel no distress, but before, if I took two or three mouthfuls, I must wait two or three hours before eating more victuals, or suffer in agony."

A new style packet containing TEN RIPANS TABULES in a paper carton (without glass) is now for sale at some drug stores - FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (120 tablets) can be had by mail by sending forty-eight cents to the RIFANS CHEMICAL COMPANY, No. 10 Spruce Street, New York - or a single carton (TEN TABULES) will be sent for five cents.

## WANTED

LADIES AND GENTLEMEN TO PROCURE SUBSCRIPTIONS FOR THE

### WOMAN'S HOME COMPANION

the Most Beautiful and Popular Women's Magazine in the World, on extra liberal commissions. Terms, sample copies and special helps furnished free. Address

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**SEND 50 CENTS** Cut this ad. out, send to us and we will send you this GUITAR by express, C.O.D., subject to examination. Examined at your express office, and if found exactly as represented and the most wonderful bargain you ever saw or heard of, pay the express agent Our Special Offer Price, \$2.95, less the 50 cts. or \$2.45 and express charges. THIS IS A REGULAR \$6.00 GENUINE TROUBADOUR MAHOGANY FINISH GUITAR, highly polished, beautiful inlaying around sound-hole, American patent head, best nickel-plated tail-piece, powerful and sweet toned, extra set of genuine Glendon strings and a Guckert book of chords which teaches anyone how to play. Write for free musical instrument and organ and piano catalogue. We sell Violins at \$1.75 and up. Mandolins \$2.95 and up. Banjos \$1.24 and up. Organs \$22.00 and up. Pianos \$125.00 and up. Everything at lowest wholesale prices, and all subject to examination before paying. Address: SEARS, ROEBUCK & CO. (Inc.), Chicago, Ill.

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**100 DIFFERENT WAYS OF MAKING A LIVING** A very valuable guide to those seeking employment; a useful book to parents in deciding what to do with their children; will show ways and means of making a living that you never thought of before. Link Publishing Co., 509 Vanderbilt Building, N. Y.

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**AGENTS WANTED** Free outfit. Several earn \$25 weekly cash. Brattice, 243 Pearl, New York.



## OUR MISCELLANY

WHAT is probably the most venerable piece of furniture in existence is now in the British Museum. It is the throne of Queen Hatsu, who reigned in the Nile valley some 1,600 years before Christ.

A GERMAN biologist says that the two sides of a face are never alike; in two cases out of five the eyes are out of line; one eye is stronger than the other in seven persons out of ten; and the right ear is generally higher than the left.

ONE of the strangest streams in the world is in East Africa. It flows in the direction of the sea, but never reaches it. Just north of the equator, and when only a few miles from the Indian ocean, it flows into a desert, when it suddenly and completely disappears.

CAMP-MEETINGS arose in this wise: Late in 1799, or early in 1800, John and William Magee, brothers, the first a Methodist local preacher, the second a Presbyterian minister, started from their settlements in Tennessee to make a preaching tour into Kentucky. Such interest attended their work that at the next meeting many families encamped in the woods. The co-operation of these brothers was so pleasing an example of fraternity that the earliest camp-meeting included members of every denomination.—Outlook.

### GETTING DOWN TO THE FIRST CAUSE

The professor of natural science in one of our best-known colleges was discussing in a recent lesson the process of fertilizing plants by means of insects carrying the pollen from one plant to another. In order to amuse the class he extended Darwin's ingenious illustration used in the "Origin of Species," about the connection between ants and clover, and said that old maids were really the ultimate cause of it all. The attention of his hearers was strained to its utmost as he proceeded:

"The bumblebees carry the pollen," he declared; "the field-mice destroy the nests of the bumblebees, therefore it is quite evident that the more field-mice there are in any neighborhood, the fewer the bumblebees and the less pollen variation of plants. But ants devour field-mice, and old maids protect ants. Therefore, the more old maids, the more ants, the fewer field-mice, the more bumblebees."

"Hence," was the professor's triumphant conclusion, "old maids are the cause of variety in plants."

At this point a fashionable young freshman, with a single eye-glass and a general appearance indicating that he was got up regardless of expense, arose and asked:

"I sa-a-y, professah, what is the cause—ab—of old maids—don't you know?"

"Perhaps Miss Brown [a quick-witted member of the class] can tell you," suggested the professor.

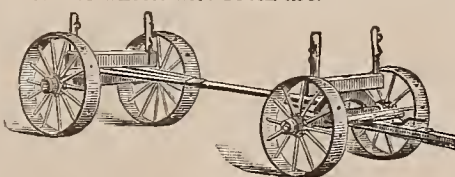
"Dudes!" said Miss Brown, sharply, and without a moment's hesitation.—Philadelphia Saturday Evening Post.

### TO AVOID STOOPING

Many growing young folks, especially those tall for their age, are inclined to stoop, and well-meaning persons often advocate the use of braces or shoulder-straps as a means of correcting the tendency. The braces may force an upright carriage, but they do not give the wearer any means of maintaining it, since they prevent the exercise of those muscles which should be trained to produce an erect figure. Any exercise which strengthens the muscles of the back and shoulders will aid in correcting this defect. Old-fashioned mothers used to drill their stooping daughters to walk with a plate carried on their heads, and this is really a good practice. High pillows and very soft mattresses are blamed as an aid in producing this defect, and without doubt a flat, rather hard bed, with low pillow, is preferable for growing children. A stooping, awkward walk detracts so much from the appearance that there is every reason to avoid it, apart from the bad effect it exercises on the physical condition.—Home Queen.

### FARM WAGON FOR ONLY \$19.95

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Co., Quincy, Ill., has placed upon the market a Farmer's Handy Wagon, sold at the low price of \$19.95. The wagon is only 25 inches high, fitted with 24 and 30 inch wheels with 4 inch tire.



This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

## SEND US ONE DOLLAR

And this ad and we will send you this Large Handsome Latest 1898 Style COAL AND WOOD HEATING STOVE, by freight C. O. D., subject to examination. You can examine it at your freight depot and if found perfectly satisfactory, exactly as represented and equal to heaters that retail at \$15.00, pay the freight agent our special price, \$7.87, less the \$1.00 sent with order, or \$6.87 and freight charges. The stove weighs 145 lbs. and the freight will be about 70c for 500 miles, greater or lesser distances in proportion.



Our special price with Coal Grate \$7.32, with Wood Grate, \$7.42, with Coal and Wood Grate, \$7.87.

### THIS OUR ACME HEATER

is one of the handsomest heaters made, has 14-inch fire pot, is mounted with 18-gauge smooth steel, heavy cast-iron fire pot, shaking and dumping draw center grate, large ash pan, and the perfectly safe ash-pit doors swing on a donkey hinge, is beautifully ornamented and decorated with rocco trimmings, highly polished and heavily nickel plated foot rails, large nickel plated name plate, nickel plated top ring, nickel plated fancy arm, nickel plated hinge pins and knobs, large swing top cooking lid under swing top, check draft at collar and in feed door.

WE ISSUE A FINDING GUARANTEE with every stove and guarantee safe delivery to your railroad station. Order to-day and save \$7.00 to \$10.00. Write for our Free Stove Catalogue. Address, SEARS, ROEBUCK & CO., CHICAGO, ILL.

### An American Watch.

A handsome open face Watch, fitted with sunk dial and beveled heavy non-breakable crystal. Full size, dust proof, nickel case. American lever movement, stem wind, stem set. Absolute reliable time-keeper. With each Watch we give a Registered Certificate of Guarantee. This fact and the fact that they have been established since 1877 is proof of the reliability of our offer. Our object in making this offer is to advertise our house, and send you with your order our 200-page illustrated catalogue of Watches, Diamonds, Jewelry, Clocks, Silverware, etc. We have the LARGEST WHOLESALE JEWELRY Establishment in the Northwest, and want to extend our business and make you one of our customers. If this watch is not in every way as we represent it, return the Watch and Certificate and we will refund your money. Sent postpaid on receipt of price \$1.25. A. H. SIMON, Wholesale Jewelry House, ST. PAUL, MINN. Dept. F-1



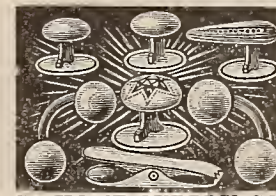
Having recently purchased the entire stock of watches from a bankrupt firm, consisting of solid gold, silver and gold-filled cases, we shall offer a portion of the entire lot at prices never before heard of in the watch trade. Among the stock are 3,750 AMERICAN STYLE WATCHES, in SOLID GOLD-FILLED CASES, which we shall sell singly or by the dozen to private parties or the trade, at the un-hoard-of LOW PRICE of \$3.98 EACH. Each and every watch is guaranteed a perfect timekeeper, and each watch is accompanied with our guarantee for 20 years. Think of it! A genuine American Style Movement watch, in solid gold-filled case, and guaranteed 20 YEARS, for \$3.98. Those wanting a first-class, reliable time-keeper at about one third retail price, should order at once. Watch speculators can make money by buying by the dozen to sell. CUT THIS OUT and send to us and we will send a watch to you C. O. D., subject to examination, by express, upon approval. If found perfectly satisfactory, and exactly as represented, pay \$3.98 and express charges, and it is yours, otherwise you do not pay one cent. Can we make a fair offer? Be sure to mention whether you want ladies' or gents' size. Price per dozen, \$42.00. If full amount, \$3.98 is sent with the order, we will include one of our special heavy GOLD FILLED CHAINS, which retail the world over, for \$1.00. Address at once, SAFE WATCH CO., 19 Warren St., NEW YORK.

## Notice to Investors

The Free American Mining Company has decided to place upon the market for development purposes Fifty thousand shares of its capital stock at the small price of Ten Cents per share, this amount being estimated as sufficient to place the property on dividend basis. Subscriptions for stock will be received by the undersigned in amounts of five dollars or over until all is subscribed. This is a fine opportunity for people who would like to invest small amounts in California mines. Prospectus and full particulars will be mailed free to any one writing the undersigned. To the first party answering this advertisement and mentioning this paper I will forward free fifty shares of stock in this mine. References, Brinn Bros., General Merchandise; Wagner & Co., Butchers; Knight & Co., Foundry; Allen Lumber Co., Sutter Creek. Signed, WILFORD DENNIS, Secretary, Sutter Creek, Amador Co., California.

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A Pleasant, Simple, but Safe and Effectual Cure for It

Catarrh of the stomach has long been considered the next thing to incurable. The usual symptoms are a full or bloating sensation after eating, accompanied sometimes with sour or watery risings, a formation of gases, causing pressure on the heart and lungs, and difficult breathing; headaches, fickle appetite, nervousness and a general played-out, languid feeling.

There is often a foul taste in the mouth, coated tongue, and if the interior of the stomach could be seen it would show a slimy, inflamed condition.

The cure for this common and obstinate trouble is found in a treatment which causes the food to be readily, thoroughly digested before it has time to ferment and irritate the delicate mucous surfaces of the stomach. To secure a prompt and healthy digestion is the one necessary thing to do and when normal digestion is secured the catarrhal condition will have disappeared.

According to Dr. Harlandson the safest and best treatment is to use after each meal a tablet composed of Diastase, Aseptic Pepsin, a little Nux, Golden Seal and fruit acids. These tablets can now be found at all drug stores under the name of Stuart's Dyspepsia Tablets, and not being a patent medicine can be used with perfect safety and assurance that healthy appetite and thorough digestion will follow their regular use after meals.

Mr. N. J. Booher of 2710 Dearborn St., Chicago, Ill., writes: "Catarrh is a local condition, resulting from a neglected cold in the head, whereby the lining membrane of the nose becomes inflamed and the poisonous discharge therefrom passing backward into the throat, reaches the stomach, thus producing catarrh of the stomach. Medical authorities prescribed for me for three years for catarrh of stomach without cure; but to-day I am the happiest of men after using only one box of Stuart's Dyspepsia Tablets. I cannot find appropriate words to express my good feeling. I have found flesh, appetite and sound rest from their use."

Stuart's Dyspepsia Tablets is the safest preparation as well as the simplest and most convenient remedy for any form of indigestion, catarrh of stomach, biliousness, sour stomach, heartburn and bloating after meals.

Send for little book mailed free on stomach troubles, by addressing F. A. Stuart Co., Marshall, Mich. The tablets can be found at all drug stores.

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Inflicted with SORE EYES DR. ISAAC THOMPSON'S EYE WATER

## THE SACREDNESS OF APPOINTMENTS

There is one thing that is almost as sacred as the marriage relation—that is, an appointment. A man who fails to meet his appointment, unless he has a good reason, is practically a liar, and the world treats him as such.

"I give it as my deliberate and solemn conviction," said Dr. Fitch, "that the individual who is tardy in meeting an appointment will never be respected or successful in life."

"If a man has no regard for the time of other men," said Horace Greely, "why should he have for their money? What is the difference between taking a man's hour and taking his five dollars? There are many men to whom each hour of the business day is worth more than five dollars."

"It is not necessary for me to live," said Pompey, "but it is necessary that I be at a certain point at a certain hour."

When President Washington dined at four, new members of Congress invited to dine at the White House would sometimes arrive late, and be mortified to find the president eating. "My cook," Washington would say, "never asks if the visitors have arrived, but if the hour has arrived."

When his secretary excused the lateness of his attendance by saying that his watch was too slow, Washington replied, "Then you must get a new watch, or I another secretary."

Franklin said to a servant who was always late, but always ready with an excuse: "I have generally found that the man who is good at an excuse is good for nothing else."

On the eve of Nelson's departure on a famous cruise, his coachman said that the carriage would be at the door punctually at six o'clock. "A quarter before," said the admiral. "I have always been a quarter of an hour before my time, and it has made a man of me."

Napoleon once invited his marshals to dine with him, but as they did not arrive at the moment appointed, he began to eat without them. They came in just as he was rising from the table. "Gentlemen," said he, "it is now past dinner, and we will immediately proceed to business."

## MACHINE-MADE FLOWER-POTS

An opportunity was afforded to a number of newspaper representatives the other day to inspect the pottery works at Walthamstow. The principal industry carried on here is the making of flower-pots, and this is done in a manner quite new to this country, the entire article being made by machine instead of by hand, as has been the custom hitherto.

The clay is first of all dried by being exposed on the floor of a suitable room and prepared; it is then passed into a press, which forms the quantity of clay into a shaped lump, technically called a "clot." This is carried on to a mold, into which it is pressed by a plunger or bolt, which forms the clay into the familiar shape. The edge of the pot is then trimmed by hand, and the article is ready to be partially dried and then passed on to the kiln. The whole process is remarkable for its simplicity and ingenuity, nothing but a little oil being used to lubricate the clot before being placed in the mold.

In these machines, which make pots of all sizes, the difficulty of getting the pots to leave the dies without breaking has been overcome. The articles are turned out at an average rate of fifteen to sixteen a minute, and the time required to make the complete pot is two and one half days, instead of four days to a month, as when done by hand. Two thirds of the ordinary amount of burning only is required, and the resulting-pot is claimed to be more true to shape, lighter, firmer and stronger than the ordinary.

In view of the fact that the demand for flower-pots in this country is said to average five hundred millions annually, the machine would seem to supply a distinct want to meet this consumption, while, at the same time, it does not affect the production of artistic pottery, as that; by reason of its varied shapes, must always be produced by the cunning of the hand-worker.—London Times.

"I regard 'American Women' as superb in every respect," writes that most experienced agent, Mr. J. L. Terry, Longview, Texas. "I feel absolutely sure that never before was any such volume furnished the public for so little money, and in spite of financial depression from the low price of cotton, I expect to do a good business."

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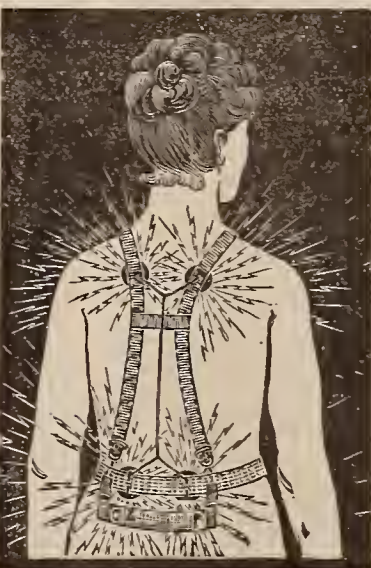
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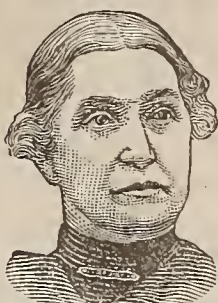
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## HOW LEAD-PENCILS ARE MADE

The first thing to be said about lead-pencils is that they are not lead-pencils at all. Once upon a time sticks of lead were used for making marks on paper and wood, and the name has survived, though nowadays all the pencils are filled with graphite, or plumbago. This mineral is found in only a few places in the world—in Cumberland, England, along the Laurentian ranges in the province of Quebec, and at Ticonderoga, Vt. The largest mines on this continent are at the latter place.

The graphite is taken in the lump from the mines and carried to the reducing-mill, where it is ground or pulverized in stamp-mills under water. The fine particles of the graphite float away with the water through a number of tanks, collecting at the bottom of these reservoirs. It is packed in barrels in the form of dust and sent to the factory, where tens of thousands of lead-pencils are turned out every day. The pulverized graphite is so fine that it really is a dust, dingy in color and smooth and oily to the touch. It is divided into various grades of fineness by floating it on water from one tank to another. The coarse dust sinks to the bottom of the first tank, the next finer to the bottom of the second tank, and so on down the line, the finest powder for the finest pencils settling in the last tank.

In another series of tanks the German pipe-clay, which is mixed with graphite to secure the different grades of pencils from very soft to extra hard, is graded in the same way, by floating. The finest clay is mixed with the finest graphite, being ground together between stones, and the hardness of the pencil is secured by increasing the proportion of clay in the mixture. For the medium grades seven parts by weight of clay are mixed with ten parts of graphite. After the graphite and clay are ground together the mixture is put in canvas bags and the water is squeezed out under a hydraulic-press, leaving a mass the consistency of putty. This plaster material is placed in the forming-press, which is a small iron cylinder, in which a solid plunger or piston works up and down. A steel plate having a hole the size and shape of the "lead" is put under the open end of the cylinder, and the plunger, pressing down, forces the graphite through the hole, making a continuous thread or wire of graphite. As long as this thread is moist it is pliable, but it becomes brittle when dry, so it is handled rapidly. It is cut into three-lead lengths, straightened out, and then hardened in a crucible over a coal fire. The leads when taken from the crucibles are ready for the wood, which is pine for cheap pencils, and cedar for more expensive ones. When the strips of wood are received at the factory they are run through a machine which cuts in each one six grooves, round or square, and at the same time smooths the face of the wood.

The filling of the strips is done by girls. The first one takes a grooved strip of wood in her left hand and a bunch of leads in the right. She spreads the leads out fan-shape, and with one motion fills the six grooves with leads. Next to her sits another girl, who takes the filled strip and quickly and neatly lays on it another grooved strip which has just been coated with hot glue by a third girl. The filled and glued strips are piled upon each other and put in a press, where they are left to dry. The end of the strips are evened off under a sandpaper wheel, and then the strips are fed into a machine which cuts out the individual pencils, shapes them, and delivers them, smooth and ready for the color and polish, in six streams. The coloring is done in liquid dyes, after which the pencils are sent through the varnishing-machine. Then follows the stamping and finishing, all done by automatic machines, and finally the finished pencils are packed around the oval, grooved blocks, tied, papered and shipped.—School and Home.

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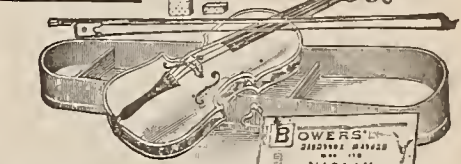
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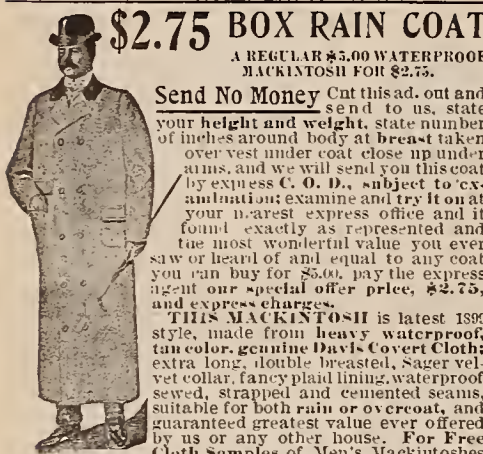
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## THE STORY OF CUBA'S FLAG

Dr. John Guiteras, of the University of Pennsylvania, the Pennsylvania representative of the Cuban junta, not long ago gave an explanation of the meaning and origin of the Cuban flag. Gen. Narciso Lopez, some time officer in the Spanish army, afterward revolutionist and filibuster, first championed the cause of Cuba Libre. Though born in Venezuela, Lopez loved his adopted people. Seeing the oppression and misery under which they groaned, he resigned his commission in the ranks of Spain and came to the United States. Here he secretly organized an expedition with which to conquer the Pearl of the Antilles and free it from the heavy yoke of the mother-country.

The flag was designed by General Lopez, in 1851, when, for the second time, he invaded Cuba. It was first raised at Cardenas in that same year. The five stripes stand for the five departments into which Cuba was then divided. The colors of the American flag and the lone star were adopted because this movement of General Lopez had some tendency to annexation.

Texas, formerly the Lone Star state, had been admitted into the Union six years before. The Cuban flag indicated the general's wish that this lone star, new risen, should soon, also, be placed among the others on the glorious ensign of the United States. When Lopez was asked why he had placed the star on a red field instead of on a blue, he said, "I want to be a rebel in everything, even against heraldry." The original designs and the first Cuban flag ever made are at present in possession of M. A. Villaverde, a Cuban patriot, of New York.—Saturday Evening Post.

## NOT AT ALL DISTURBED

President Grant and his daughter Nellie had gone to hear Parepa Rosa, Nellie sitting sedately erect in a maroon-velvet suit, and her father lounging comfortably in the background, talking to a lounging friend.

The house was crowded, but as Parepa Rosa, with portly figure and a voice as grand and deep as the ocean almost, appeared on the stage, the prima donna was conscious of but one presence—the warrior whose deeds were so renowned that for very awe she trembled.

She might have been spared herself her emotions, however, for the general was mightily interested in his statesman friend beside him, and the great English singer might have been promenading on the cliffs of her native Albion for all the general knew or cared.

Then the little girl whispered, "Papa, Parepa is singing."

Whereupon the hero of Shiloh interrupted his conversation long enough to say, indulgently—he adored his small daughter—"All right, Nellie; she is not disturbing us. Let her sing." And the best part of the story, next to its being true, was that Parepa heard of it through the statesman, and, being as humorous as she was portly, she had a good hearty laugh at her own expense, and admired Grant more than ever.—Washington Times.

## DEAN SWIFT MAKES JOHN A PARTNER

"Look ye, man, why haven't you cleaned and polished my boots?" asked Dean Swift of his eccentric servant, John, at a tavern where they had just passed the night.

"What's the use of polishing such things?" asked John, doggedly, as he held up the boots, discolored and grimy.

"Very true," said the dean, and without further protest he put them on. Then he went to the office and gave orders that John should have no breakfast. He partook of his own, and directed the hostler to saddle the horses and lead them to the door.

"Mercy!" cried John, when he found the dean ready to start, "I haven't had any breakfast yet."

"Oh," replied Swift, "I can't see the use of your breakfasting; you would soon be hungry again."

John could think of no answer to such an unexpected application of his own sophistry, so he maintained a stoical silence.

They mounted and rode on, the dean in advance reading his prayer-book, and the servant following at a respectful distance.

"Hark ye, my man," said a stranger whom they met, after he had observed the two closely, "you and your master seem to be an uncommonly sober pair; may I ask who you are and where you are going?"

"We are as near saints as we can be," replied John, solemnly, "and we are going to heaven, I hope. My master's praying and I'm doing the fasting."—Success.

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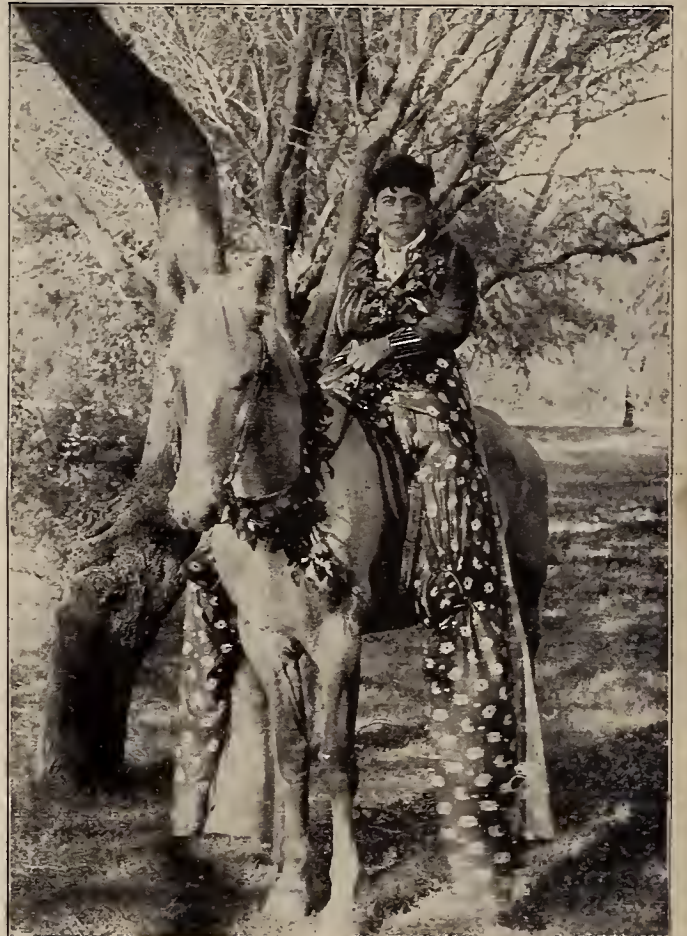


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## FARM LIFE IN HUNGARY

BY EDWARD A. STEINER

THE Hungarian peasant is the happiest mortal among those who till the soil in Europe. He inhabits a fertile land; large rivers and lakes fill it with moisture, on the hillsides the vine flourishes, the mountains give pasture to his cattle, and the vast fertile plains are planted with maize and sown with wheat. His home is not large, it is thatch-roofed, and a village full of these cottages, one close to the other, is as monotonous as the peasants themselves are picturesque. Behind the cottage is the stable, and man and animal live in close proximity to each other. A fire in a village means the destruction of nearly every house, or at least one side of the street, and as there are no means of fire protection these fires are frequent. The village is composed of one long, broad street, and its chief characteristic is a well, with a high beam and hanging hucket, which looks like a gallows; and this specter-like affair is the chief ornament of the village as well as the meeting-place of the villagers.

The fields stretch out around the village, and the laborers leave their homes at sunrise and scatter to all points of the compass. Men and women go out together, singing as they go. The babies are tied to the backs of the mothers, and out in the field they are put behind a bush or under a shady tree. A large gag made out of bread-crumbs and sugar is put into the baby's mouth, and this is warranted to keep it from crying. The dinner, which consists of potatoes, beans or cabbage, and huge slices of rye-bread, is carried in a sort of twin pot, and whisky and wine go with every meal. The day passes with work and good-natured banter, and at dusk they return, cheerily singing again their joyous songs.

The dress of the Hungarian peasant is elaborately ornamented, nearly every inch of the girls' dress being embroidered. The men wear for every day a sort of divided skirt and coarse linen shirt, and in the winter a sheepskin coat, with the legs of the sheep hanging over the shoulders. Even their bed-linen is thickly embroidered, and their furniture is gaily painted.

Sunday is the great holiday. In the morning they bring a little produce to market, then go to church, and after church into the village inn, where, with music, drink and dance, they spend the fast-fleeting hours.

The harvest festival is a most interesting

occasion. A high crown is woven out of grains and flowers, and a man adorned by it precedes the harvesters, who, to the noise of the gipsy musicians, march to the lord of the village, where they sing their harvest-song, are treated to wine and whisky, and spend the night in dancing on the green.

We will now take a little journey to Hungary's plains, where vast areas of level field and grass-land stretch out between the river Danube and the Theiss. The plain is called a puszta, and the chief village is called pusztafold. The two thousand people who live here are all rigid Calvinists and a very prosperous community. The pastor of this flock, a benign-looking old man, came here as a young man, and will die among his people. He is a father to every soul, knows every child, is obeyed implicitly and loved very tenderly. His salary is small (about three hundred florins a year), which the government pays him regularly. I spend a night in one of his three rooms, and early in the morning, in company with his son, am driven out toward the puszta, the vast plain.

A horizontal line of gray that is tinged with red is all we can see; we hear the bleating of far-away cattle; now a thatch-

their shaggy, wolf-like dogs following them. Rabbits are scared by the hoofs of our horses, hares run over the tall grass, storks make music with their beaks like the negro with his bones, and the lark lifts herself from the ground, singing her joyous morning song. Maidens with baskets on their backs pass us on their way to market, and we gladly return their greeting "jo regelt"—good-morning.

Now we are at the home of a shepherd. The breakfast is cooking, and the cook sits beside the pot; that's all there is room for. The shepherd lives in his sheepskin coat, which is bed and garment to him. It is his parlor suite and sitting-room, and the little hut shelters him from the rain. These are Hungary's cow-boys; noble-looking fellows, bred for this task, without a vice; whisky has not poisoned their blood, and they know no



HARVESTING WHEAT

bushes and beds of flowers—and in a moment it is all gone and nothing is seen but sagebrush and herding cattle and sheep. It was the Fata Morgana, nowhere more beautiful than on these plains.

It is noon. The sun sends his hot rays upon the earth; the cattle stop grazing and seek one another's shadow, and the shepherd sits still in the sunlight's glow, with the sheepskin coat where it always is—on his back.

The sun is sinking; the sky is touched by clouds, like the fleece of a shorn flock of sheep, and a haze hangs over the blue vault. The evening star leads out the heavenly host one by one, the air grows cool, the insects hum their evening song and suddenly are silent. Earth and sky are blending, the frogs begin their nocturnal concert, and the air vibrates with the croak, croak, croak, of the frog chorus; the bats whisk about and make one's cold blood colder, the screech-owl sends it to the freezing-point, and the distant howl of a wolf sends it below zero. The cattle are gathered for sleeping-time, and the bells of the leaders ring out the vesper tune. The shepherds crowd around an open fire, play on lutes and sing us an evening song full of melancholy sadness, calling out to us as we turn our horses homeward, "Jo eczokat"—good-night.

A wedding among the peasants is extremely picturesque. Foreriders come rushing into the town, shooting pistols and making enough noise to waken the dead; then comes the procession—horses gaily decorated by neckerchiefs, the bride in a wagon, her hair braided and tied up with yards of ribbons, the bridesmaids around her, the groom following, accompanied by relatives and friends with whisky-flasks in their hands, and huge cakes, which they throw at their friends in the street. The procession closes with wagons full of the bride's belongings. There are downy feather-beds, and feather-beds on top of feather-beds, and gaily painted crockery, and chests full of linen, and a distaff, and a spindle, and benches, and oh, everything that a bride wants, and a grunting pig and a cow tied to the last wagon. At the church, while the bride and groom are being tied together, the foreriders untie the pig and the cow and the feather-beds, which they pawn for wine and whisky, and the bride has to redeem them. At the village inn they get full, and start on their homeward way with drooping heads and tangled trappings. Here the feast is spread—cah-



A HUNGARIAN FAMILY

roofed csarda (inn) rises from the darkness, and the mistress is making her morning toilet at the front door. Now the line grows rounder, clearer, and our eyes gaze upon a sea where acres of grass bending under the morning wind are the waves, and a far-away church-spire looks like the mast of a passing ship. Villages and cities lie in ruins since the sword and pillage of the Turks have laid them low; but the plow has redeemed many a desert, and fields of yellow corn and wheat stretch out, touching the horizon. The darkness is entirely dispelled, the gray veil of the night has been torn, and the sky is resplendent in a garment of blue. A delicious aromatic coolness with the odors of earth and grass and wild flowers fills us with delight. Nature in her great simplicity has awakened to new life, the cattle straggle along to their pastures, and behind them come the rugged shepherds,

sickness and no fever. They are stanch pieces of Nature's furniture direct from Nature's factory. They sing Nature's songs and read Nature's books and think Nature's thoughts. Once a year in the csarda they have a holiday. They meet one another, meet their sweethearts, and are beguiled by the gipsies' fiddle and toss their stiff bones to the wild music of the Csardas, the national dance. They drink some of the fiery Tokay wine, and go back again to the puszta, to their cattle, and to the lonely hut where they are burnt again by summer's heat and chilled by the winter's blast. They have no telephone except the air, no electricity except the lightning, no railroad trains except the fast-moving clouds, no visitors and friends except their dogs and cattle, the green earth beneath them and the great God above them.

About eleven o'clock in the morning we see rising from the ground huge marble pillars, moving up to the sky and scattering again into a thousand arched temples. Churches rise out of the mist, and palaces with turrets and gables. Now it is a lake, and boats move about, rocked by a breeze. Now a troop of soldiers with guns and lances. Now it is a city with smoke-stacks and steeples; now a park—a paradise of trees and



THRESHING WHEAT ON THE DANUBIAN PLAINS

(Concluded on page 8)

## FARM AND FIRESIDE

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**I**N regard to the contention that the United States cannot hold the Philippines as a colony under a distinct tariff system, and with its citizens restricted in the exercise of the franchise, Senator Morgan, the ranking Democratic member of the Senate foreign relations committee, says:

"The Constitution does not enter into the question at all. That paper was designed to control matters between the states and territories of the Union, and did not concern itself about outside matters. Our government has as much right to hold colonies as France or England has, and to make such rules for their control as it may see fit. We can impose a duty on Philippine products or exclude them altogether. We can exclude such of their citizens as we may choose. In short, in foreign matters we may do anything that any sovereign power may do, unless forbidden by some treaty.

"The treaty by which we acquired Alaska declared that it should become part of the United States, and hence the provision of the Constitution announcing that all duties shall be uniform among the states came into effect and prevents our imposing duty against Alaskan products or charging one on goods sent from this country into Alaska. But unless the Spanish treaty provides to the contrary, Porto Rico and the Philippines will not become territories of the United States, but will simply be outside possessions, not integral parts. Hence we can put any duty against them that we may choose. Why, take the case of Hawaii. It belongs to us. We own it, and yet we continue to collect duties on its products, simply because Congress has declared that we should. There is no question of military government. Hawaii has a civil government, and if we can maintain a tariff against it for a moment we can maintain it forever if we choose.

"Further, we can, if we desire, treat the Chinese and other natives of the Philippines and of Hawaii just as we have treated the Indians. The government makes treaties with these as if they were independent nations. It shuts them up on their reserva-

tions and practically holds them prisoners there. No Indian can leave his lands and live elsewhere, except so far as we may permit. There is nothing in the world to prevent us from treating the Philippines just as we have treated the Indians, as subject tribes, whose lives we regulate, but who, nevertheless, are not citizens of the United States and have not the rights of citizens. The Constitution does not expressly give us this authority, but, as I have said, the Constitution has nothing to do with the matter. It does not give us the right to annex any territory, but that has been held to be among the implied powers of the general government.

"Hence, if the President chooses, he can, with the consent of Congress, annex the Philippines and hold them as our own property, and yet maintain a tariff against them, and even exclude their citizens and products from the United States."

**I**N a recent number of the "Atlantic Monthly" Mr. Benjamin Kidd says, in part:

"I have recently been traveling over a large part of the United States, particularly in the West. I have been as far west as the Pacific coast, passing over two main lines of communication, out one way and back another, stopping at various places, and living among the people a good deal. On the subject of expansion I talked with the people generally. I was struck by two great bodies of opinion, as I might call them, on the question of expansion. One of these I might describe as being a sort of unreasoning body of opinion; that is to say, it has not been reasoned out. It takes the shape in the popular mind of a pronounced and even intense feeling that in this matter of expansion the duty of the United States is clear. Ask the farmers and business men in the West why the course which they propose is the duty of America. They will give no direct or logical reason, as far as I could find out. But they are, nevertheless, perfectly decided about one thing, and that is 'that this thing has got to be done.' You ask, 'What thing?' and they reply, 'Why, that America should keep a stiff upper lip to the world; should hold that which she has not sought, but which has come to her; should keep what she has got.' She must, in short, in a favorite phrase, be 'true to her own destiny.'

"The meaning of Washington's farewell address, delivered when the United States contained only about 6,000,000 people, surrounded on every side by hostile powers and hostile natural conditions, appears to be lost when the 6,000,000 have grown to 70,000,000, and are already reckoning the day when they will be 200,000,000. The people whom Henry Adams described as living at the beginning of the nineteenth century 'in an isolation like that of the Jutes and Angles of the fifth century' have tamed a continent, have covered it with a vast network of the most magnificent railroads in the world, have grown to be the largest and most homogeneous nation on the face of the earth, with a great world-movement behind it, and certainly a great world-part before it. It is because the man in the western states to-day, in a dim, instinctive way, realizes these things, because he has himself been in the midst of this development, and has even been a factor in it, that he seems to be willing to take the risks which more theoretical minds hesitate at.

"Within a time which many of us will live to see the American continent will be settled up; it is very nearly settled up already, in the agricultural sense. The next era of expansion, which we are almost in the midst of, is the great era of industrial expansion, manufacturing expansion—an era of expansion which will undoubtedly bring the United States into very important relations with the trade of the world. The people of the United States will be driven to seek the widest possible outside market for their industrial productions; they must be able to buy raw material in outside markets; and they will have behind them, as they will come to realize more and more clearly, a great history, for they will be the leading representatives of definite principles in the development of the world.

"Now, let us see what this trade means. It would seem that there can be little doubt that the trade of the world in the future will be largely a trade with the tropics. The tropics are naturally the most richly endowed portion of the world. Under proper

conditions of administration the possibilities of production in the tropics are immensely greater than the possibilities of production in the temperate regions. Even with the extremely unfavorable conditions which at present prevail in the tropics our civilization already rests to a large extent on its trade with the tropics.

"If we exclude consideration of the trade within the English-speaking regions, the total trade of the United States with the tropics in 1895 was \$346,000,000, as against \$535,000,000 with the remainder of the world. This is a very striking and pregnant fact when we consider existing conditions. It must always be kept in view, too, that no nation can remain permanently indifferent to the condition of a country with which it has large and vital trade relations.

"As to the logic of the situation, that is a matter solely for the American people. Yet it is one of the deepest truths of philosophy that the meaning of living things cannot be put into logical formulas. The spirit behind the Constitution of the United States is probably one of the most vital and healthy things in the world; and yet under the Constitution itself there are already the most illogical results. One of the fundamental principles of government in the United States is the assumption of the right of every citizen to liberty and the pursuit of happiness. The negro is a citizen of the United States, and yet in some states of the Union he is forbidden to marry a citizen of a different color. The Indian is a ward of the United States and not a citizen; and the Chinaman is forbidden a vote. All this is illogical. But it is not therefore wrong; and the fact remains that the spirit behind the American Constitution is probably one of the healthiest forces in the world."

**I**N the annual report from the Department of Agriculture Secretary Wilson says:

"Owing to better home demand for dairy products, it is not commercially profitable to send butter to Europe at the present time. The home demand for our best butters absorbs the supply. This is not always the case, however, and the department regards it wise to obtain for dairymen all the facts relating to the export of this article to the several commercial centers of both continental and insular Europe. For this purpose the department sent an agent to Paris to ascertain what encouragement there would be to ship butter to that port. It was found that no line of steamers sailing direct from the United States to French ports could furnish refrigerator-space, and so shipments could not be made during the heated period. An agent was also sent to Hamburg to ascertain for our people what the facts are regarding customs duties, as well as prohibitions and other difficulties that might meet exporters of butter to that country.

"Our finest butter can be profitably made and sent to both France and Germany whenever the home supply is greater than the home demand for first-class goods. The American farmer is selling cheap grains and mill-feeds to European dairymen, who meet us in European markets with products made from raw material furnished by us. There is every reason to believe that the tendency is growing within our own country toward the consumption of grains and mill-feeds at home, exporting the higher-priced products of skill. As our producers manufacture more and more on the farm, and the great volume of raw materials is turned into the higher-selling articles, we can furnish fine dairy products to European countries at a lower rate than they can be produced under European conditions on dearer lands and with dearer feeds."

**S**ECRETARY WILSON recommends the extension and adaption of the provisions of the law regarding the inspection and certification of meats and meat products for export so as to make them apply to butter, cheese and condensed milk. "The combined efforts of the government and of commercial enterprise," he says, "may succeed in the early establishment of a high reputation for American butter in desirable foreign markets. But as soon as accomplished, this becomes liable to be destroyed by the cupidity of those who, trading on this reputation, flood the same market with butter of low grade, yet still entitled to export and sale as 'produce of the United States.' This will disgust merchants and consumers alike

and reverse the reputation of our butter, just as the fine market in Great Britain for our cheese was recently ruined by the quantity of low-grade and counterfeit cheese which was exported without being marked to show its true character.

"The remedy seems to lie in extending and adapting the provisions of law regarding the inspection of meats exported from this country so as to make them apply to butter and cheese. The brands of 'pure butter' and 'full-cream cheese' should then be affixed by United States inspectors to such products only as are of a fixed minimum standard of quality. Such precautions, duly legalized and properly executed, would place the good butter and cheese of this country in foreign markets under the identifying label and guaranty of the United States government, leaving similar merchandise of lower grade to find a place for itself upon its own merits. It should be borne in mind that dairy products of Denmark and Canada, which are the chief competitors of the United States in the markets of Great Britain, bear the inspection certificate and guaranty of quality from their respective governments, and thereby maintain a great commercial advantage."

**I**N his annual report Mr. George E. Roberts, director of the mint, says:

"The gold coinage of the world in 1897 was the largest recorded, amounting in value to \$437,719,342, against \$195,899,517 in 1896. Of the former sum \$146,622,194 was recoinage, and approximately \$291,097,148 a net addition to the stock of gold coins. The principal coinage was by the United States, Great Britain, Russia, Germany, Austria-Hungary, France and Japan.

"The extraordinary coinage of the year is accounted for by the preparations of Russia, Austria-Hungary and Japan for their monetary reforms. In the case of Russia, particularly gold, which has been accumulated for years, much of it in bars, was passed through the mints to prepare for circulation.

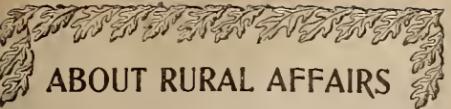
"The completion of Russia's plans of monetary reform and the opening to the United States of the commerce of her great gold reserve, systematically gathered, year by year, until it is the greatest single hoard of treasure the world ever saw, is in itself a most notable event.

"The development of Russia, her position as an exporter of breadstuffs, her policy of developing home manufactures, will all lend to protect her stock of gold and make use for more, but her own gold production is increasing, and unless she is about to enter a period of unprecedented activity and development, seems likely to supply her needs.

"Stocks of gold in sight in European banks and government treasuries from December, 1892, to December, 1897, increased about \$550,000,000, or over forty per cent. The stock of gold in the United States increased in the five years \$95,457,000. The increase in the gold holdings of the banks of Australia, Canada and South America was about \$15,000,000. Total gold thus accounted for, \$960,450,000."

**S**OME of the self-constituted modern fathers of the republic are giving an exhibition that is positively amusing. They are "seein' things," and prophesying dire evils to American workingmen and farmers because the United States has overthrown Spanish sovereignty and misrule in the Antilles and the Philippines, and assumed control of Spain's lost colonies. Because victory has crowned our war for humanity, American workingmen will not suffer from the competition of yellow and black labor, nor will American farmers be robbed of \$200,000,000 a year. A wiseacre riding a nightmare full tilt against a man of straw is not a cause of alarm.

**A**FTER one month's existence the federal union of Nicaragua, Honduras and San Salvador, under the name of the United States of Central America, collapsed. There was an insurrection in Salvador against the formation of the union. The President of Nicaragua refused to allow the Nicaraguan troops to be used against the Salvadorians. The forces of Honduras which were sent into Salvador to suppress the outbreak were compelled to retire. The federal organizers then formally declared the union dissolved, each state again becoming an independent sovereignty.



ABOUT RURAL AFFAIRS

**Best Fertilizer for Irish Potatoes**

The best fertilizer for any crop is undoubtedly the one which gives the best results for the least money. In a general way I know of nothing that puts plant-foods of the proper kind into the reach of the potato-plant as perfectly and cheaply as clover does. Clover is the manure of all manures for the potato crop. It gives us not only good yields, but also clean tubers. Scab does not give us much trouble when we plant potatoes on a nice fresh clover sod in sandy or gravelly loams, or on a piece of good land which had been in clover the year before and on which a crop of corn or grain of some kind was grown on the clover sod for the purpose of getting the land in best order for the following potato crop. If the soil is in good condition (and of course it does not pay to grow potatoes on very poor soils), in other words, if it contains mineral plant-foods—potash and phosphoric acid—in liberal supply already the clover alone will furnish to the potato crop food enough to make a good crop of tubers. It brings up to near the surface not only potash and phosphoric acid in best forms for immediate use of the potato-roots, but nitrogen, both from the soil and air. When the land is a little thin, and perhaps as a matter of safety in most cases, even when the land seems fairly fertile, it will pay to push the clover or reinforce the soil fertility the year that the potatoes are planted by artificial applications. And I suppose my friend really wanted to know what concentrated manures he should use in such a case for cheapness and best results. In my earlier career as a gardener, and before I paid much attention to the chemistry of plant nutrition, mislead, also, I imagine, by the teachings of our leading agricultural papers, I used and recommended as the only safety the “high-grade special potato manures” of our leading fertilizer manufacturers and fertilizer mixers. These manures were sold at about \$45 a ton, and I even now confess were and are “safe” manures. They can be depended upon to largely increase the potato crop where properly applied on land in need of plant-foods. But these manures contain a large percentage of the costly nitrogen, and in our days, when we have to be very careful about our expenses, lest the expenses exceed the returns, we prefer to get our nitrogen without cost and without price through the instrumentality of clover as already explained. If you cannot grow clover, and have not informed yourself about the needs of your soil and the nature of the mineral plant-foods, you may pay the penalty by using the higher-priced special potato manures of the dealers, and perhaps raise a good crop, but this at a higher cost of production than your competitor who is fully posted can raise it. An exact formula for “the best potato fertilizer” cannot be given. We have soils that contain all the potash that is needed, and to spare. It would be senseless to pay out money for potash to add to such soil. And yet if you were using a “high-grade complete potato fertilizer” you would be doing just that. There are soils well enough provided with phosphoric acid and only needing the addition of potash to make them fully productive. Why spend money for that plant-food? It is for you to learn the true condition of the soil you wish to use for potatoes, and then apply just the deficient element or elements and nothing more. That is rational and economical manuring. To be able to do that you have to understand the indications of the true soil conditions. In a general way I suppose that sandy soils are more liable to be in need of potash than are soils of a clayey character. I know that the potato crop uses potash quite freely. I know that the repeated production of all kinds of grains draws heavily on the phosphoric acid supply of the soil. From these and other facts, and a knowledge of how the land has been cropped for the last ten, twenty or more years, we must make our estimates of the needs of the soil.

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**Cost of Standard Chemicals**

To supply potash I use nothing but muriate of potash. It is the cheapest form, I believe, in which we can buy this plant-food in concentrated form. It usually can be had at about \$40 to \$45 a ton. This brings the cost of pure potash (as oxide) down to about four cents a pound. In the general run of commercial fertilizers I have to pay not less than six cents a pound for it. For my supply of phosphoric acid I al-

most exclusively look to dissolved South Carolina rock. In this form it is just as soluble and just as effective in every way as I can buy it in dissolved animal bone or in any other superphosphate. The ton of dissolved rock analyzing about fifteen per cent of soluble phosphoric acid can be bought at from \$7 to \$10, so that a pound of acid in this form costs only about two and three fourth cents. In the general run of commercial fertilizers I more usually pay five cents and over than less for it. The question of quantity is another problem which each grower must solve for himself. There is seldom need of going to the extreme in this business. If we apply 200 to 500 pounds of dissolved rock and 150 to 200 pounds of muriate of potash to the acre on soils needing both phosphoric acid and potash we do all that can be expected to repay us in favorable returns.

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**Bush Fruits**

Another new horticultural book published by the Macmillan Company, of New York, has come to my table. It treats on “bush fruits,” and comes from the pen of Professor Fred. W. Card, of the Rhode Island Experiment Station. Like the preceding horticultural works coming from the same publishers it is thorough in the treatment of its matter, well provided with telling illustrations, attractive in its typography and altogether interesting. Its price is \$1.50. In its many chapters I also find one on “miscellaneous brambles.” Prominence is given to the Oriental raspberries, of which so much has been said and written recently. I have a plant or two each of the Mayberry (Japan Golden Mayberry), the strawberry-raspberry and the Japanese wineberry, and entirely agree with Professor Card in his estimate of their value. He says:

“Unfortunately, they have not proved so valuable as many other Japan fruits, and have comparatively little to recommend them, so that they are never likely to become very popular nor to be grown to any great extent, though two of them have some value as ornamental plants.”

How different this sounds from the glowing descriptions given of these novelties by their introducers only a few years ago. The strawberry-raspberry “is unproductive, and the fruit in its fresh state is rather unpalatable, varying from sour and insipid to somewhat bitter. When cooked, however, it is said to develop a pleasant flavor midway between the strawberry and the raspberry, and to give a brilliant, rich garnet color to the syrup.” Of the wineberry the book says: “The berry is of good size, firm and handsome, and owing to its peculiar covering is exempt from insect attacks. It has not proved to be of any real commercial value in the United States, being generally tender and unproductive. It is a peculiar and attractive plant, and well worth growing as an ornament.” I will add that I have not had fruit enough on my plants for a good taste. Only single, scattering berries were ever found on them. That the plant is ornamental nobody will deny. Yet some of our own wild brambles are not a bit less so. There is, for instance, the purple-flowering raspberry or thimbleberry (*Rubus odoratus*), common throughout the eastern part of the United States, a very pretty and attractive shrub indeed. Years ago, when I used to roam over the hills in western New York after wild fruits or on hunting trips, I often wondered why this attractive plant was not more appreciated and brought under cultivation. I have frequently gathered and eaten the fruit, although this cannot be compared with a really good raspberry or blackberry. Professor Card says about it: “It is beautiful both in flavor and fruit, and doubly desirable because it continues its blossoming and fruiting period over so long a time. The foliage alone is attractive, regardless of the blossoms. This species is frequently mentioned among ornamentals in European journals.” While we have these and other satisfactory native raspberries that may be used for ornamental purposes, and that are hardy as oaks besides, why should we pay a big price for such tender things as the Japanese wineberry only because it comes from Japan? T. GREINER.

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**THE JAPANESE SNOWBALL** is one of the most perfect shrubs that have been added to our lawns for many years. The bush is entirely clean and very pretty. The bunches of flowers are smaller than those on *Opulus*, but the color is clean and clear, and the flowers persist for two or three weeks.

E. P. POWELL.

**SALIENT FARM NOTES**

**Small Farms**

Mr. Fred Oats, of Wisconsin, asks some hard questions; is a young man, carpenter, has had but little practical experience in farming; wants to know if he could make a good living on a small farm, and at the same time accumulate a little surplus for old age.

Whether a man can make a living on five acres of land or on a hundred acres depends entirely on the man. Only a few months ago a soil-tiller told me, with rather more emphasis than was necessary, that no man could make a living on forty acres in this locality. It was very evident that he could not, because he had made a signal failure on fifty acres. But if Mr. Oates had seen his surroundings and observed his methods a short time he would at once declare he was no farmer, but merely a soil-hacker. Give me a little house and barn on ten acres of fairly good land, with one good, strong horse and a few implements, one cow, a brood-sow and a few fowls, and I would not only agree to make a living, but also—barring sickness and accidents—to lay by a small amount each year. Make the farm twenty acres with the same outfit and I would do still better. Make it forty acres and I would have to largely increase my outfit, and my expenses would be much larger, while my savings would probably be no larger than on twenty acres.

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The great and “boundless” West is now settled. There are no more vast areas of rich land to be homesteaded or purchased for a few dollars, and the time has surely come when men must be content with smaller farms. The large farms east of the Mississippi are far beyond the reach of the young man who begins life without a dollar. It takes almost a small fortune to purchase a good 160-acre farm now, and he who begins as a tenant will most likely end a tenant. To the young man with \$600 to \$1,000 I say, don’t rent—buy, if you only buy two acres. Buy enough land to build your home on. It is then yours to plant what you please on, to cultivate as you please, to improve as you please. Said an old farmer who began life as a hired man, “I wouldn’t be a tenant-farmer if I had to dig my living out of a half-acre lot with a spade. My first purchase was twenty acres. Three years afterward I added another twenty, then sixty, and that was all I wanted.” When he told me this he was the owner of one of the best and most conveniently arranged 100-acre farms I ever saw, and he had several thousands of dollars loaned out. He was then taking life easy; his three children were married, and he and his wife appeared to be as comfortable as people can be, and at peace with all mankind. He said that he felt satisfied that if he had bought the entire one hundred acres at the outset he would have been wrecked.

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Six years ago a young man said he would like to take my advice and buy five acres near a small town, but no one would sell that much off his farm. Men would sell their whole farm, or a forty or an eighty, but they would not chip off a corner. I asked him if there was not some farmer who was in debt who would sell him five or ten acres for cash. I said, offer him two or three dollars more than he asks for an acre for the whole farm. He said he would look around when he went back. Three weeks later he wrote me that he had bought and paid for ten acres, with the understanding that he was to have ten more on the same terms any time within three years. He now owns eighty acres, and owes only \$600 on it. He writes me that he has been very successful all along, but he believes it was because he has been steady, economical and thorough in everything.

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I honestly believe that any man who will be steady, economical and thorough in all he does will succeed, whether he farms five acres or a hundred. A man must use his brain to guide his muscles, and do everything he does thoroughly. Not half the farmers in the United States do half so well as they might. How often we read in crop reports, “All early sown wheat looks well. Late sown entirely killed.” “Much corn very weedy. Thin stand in many fields on account of poor seed. Considerable will have to be replanted.” Why is any of this wheat “late sown?” Simply because those who sowed it were not prompt and thorough, or because they were trying to farm more land than they could. Why was there a thin stand of corn in many fields? Because the tillers of those fields neglected to pick out

and dry the seed in the fall. A simple thing to do, and yet it was not done.

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In a daily paper of November 23d I read, “Blizzard caught farmers unprepared and stock unsheltered, and great loss results.” Notice that it was November 23d, close onto winter, and yet a blizzard catches farmers unprepared and without shelter for stock. Does not such a report as that indicate a lamentable lack of common prudence—of ordinary business sense—on the part of these farmers? Are they not wholly to blame for the losses incurred? No farmer deserving the name would be caught at that season of the year unprepared for any sort of weather. Yet thousands are, and these thousands are our unsuccessful farmers, mortgage-ridden, poverty-stricken candidates for the poorhouse.

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Smaller farms mean better farming, larger yields and surer crops. In the November crop circular sent out by the Department of Agriculture the average yield to the acre of corn is placed at the ridiculously low figure of twenty-four and eight tenth bushels. The average yield in this great corn state is placed at thirty bushels. Close about me are fields that will yield sixty and seventy bushels. They belong to men who are thorough farmers—who plow, plant and cultivate at just the right time, and who are as careful with seed-corn as with money. There are other fields which will yield twenty to thirty bushels. They belong to men who farm in a weak, half-hearted manner, and to men who are spread over so much land that their farming is almost too thin to be seen.

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Hundreds of young men seek employment in the cities because they see no chance to be anything but a farm-hand or a tenant-farmer in the country. They want to marry and live in homes of their own, but even a forty-acre farm is so far beyond their reach that they can scarcely hope ever to possess it. They have not been taught to see the possibilities that lie in ten acres of land fully cropped and thoroughly tilled. There is a grand good living for a man and small family in ten acres. He can find plenty of work for both brain and muscle on it if he tills it in a thorough and scientific manner. He can find a world of pleasure in it if he is content and steady. And, best of all, it will make him a home as cozy and as enjoyable as any he can find on the face of this earth, and give him a feeling of independence he never could have as a tenant in city or country.

FRED GRUNDY.

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**RETARDING STRAWBERRIES**

The aim of many of our northern originators is to secure a very late strawberry, and nearly every season our attention is called to new ones later by a small fraction than those of a year ago. This effort is put forth largely because the southern berry now makes its appearance in our markets long before our berries blossom.

The strawberry season may, however, be prolonged from three to fourteen days by the following simple method which the grower can completely control. Make the bed upon a northern slope, so as to lessen the influence of the direct rays of the sun; plant the latest fruiting variety found to succeed in the neighborhood, and treat the bed the first season in the usual manner, but in the autumn withhold the usual winter mulch. In February or early March, when the ground is frozen hard and as deep as it is likely to be, apply a heavy mulch of coarse manure, and tread it down between the rows. Manure that falls upon the plants must be raked off, as it will injure and may even kill them. Then cover the crowns with a thin coating of chaff, and top off with six or eight inches of marsh hay, or where this cannot be obtained, with clean straw. This triple mulch is to remain undisturbed until blossoms appear upon unmulched plants near by. If the covered leaves do not turn white the mulch may be left even later.

Enough straw immediately over the rows should then be raked off to expose the plants, which will flower and fruit even two weeks after unmulched berries of the same variety. The mulch must not be taken from the bed, but left between the rows until after fruiting is over.

The advantages in this plan are that the blossoms are protected from late frosts that so often prove destructive to the crop, and the fruit comes to market after the glut and commands higher prices.

M. G. KAINS.



## FARM THEORY AND PRACTICE

**FARMER'S WORKSHOP.**—I have visited many hundreds of farms, and it is my observation that comparatively few have any convenient and comfortable room in which many kinds of odd jobs may be done on stormy days. There is no better investment upon a farm than the right kind of a workshop. Its outfit should depend upon the mechanical skill of the

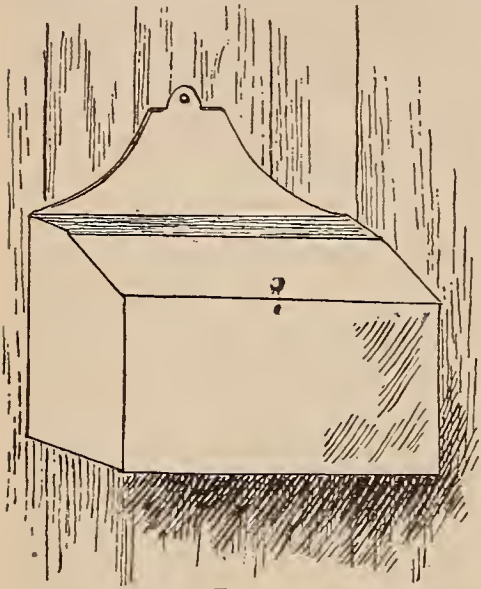


FIG. 1

farmer, and it is not necessarily a good thing to be a "Jack of all trades," but there should be a good room for indoor work, even if one has little mechanical ability. The room should be long, even if somewhat narrow. Along one side there should be a solid work-bench, made of oak plank two inches thick. Attached to this bench there should be a strong vise, such as may be seen in good blacksmith-shops. The cost of such a vise is six or seven dollars, but the investment pays well. It can hold anything in its iron jaws, from a heavy oak scantling to a small carriage-bolt, and comes into use almost every time that any sort of repair is needed. The bench and vise are essentials in the equipment of a farm workshop.

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**SHOP SUPPLIES.**—The number and kind of carpenter and harness-maker tools depends upon the skill of the farmer, but the tools that are bought should be first-class in quality and should be kept in good order. It is a waste of money to have poor and dull tools. Besides the tools there should be many supplies. First in importance I place a full assortment of nails and bolts and screws. These are most conveniently kept in pigeonholes above the bench, and should be labeled according to the various sizes of nails, etc., kept in them. A proper assortment for a farm costs several dollars at the beginning, but it saves waste of time and patience, and often makes it possible to check serious breakage of some costly implement. Some farmers try to fix everything, from a strawberry-box to a barn-frame, with an eightpenny nail, "spreading devastation" when they undertake to make repairs. Then they get the idea that they cannot make repairs, and little breakages go until they cause serious ones. Quite often it is only a matter of having nails, screws and bolts of the proper size. A pretty complete assort-

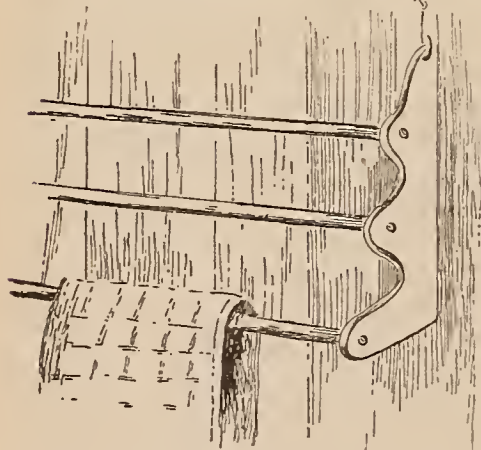


FIG. 2

ment of these costs little less than some single repair bill, and in connection with bench and vise serves to keep repair bills small.

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**SEASONED LUMBER.**—One load of assorted lumber will last most farmers a long time, but the lumber is needed just as badly by the farmer as it is by the smith, who would otherwise make the repairs. There should be some planed boards, and rough stuff of

various widths and thicknesses. This supply for repairs should be kept in the shop and held solely for the purpose for which it was bought. Then it is at hand when wanted.

A side of good leather should be kept, also buckles, snaps, rings and rivets. Staples, books, rivets, washers and the numerous other odds and ends that are in demand at some time during the year should be stored away in shelves, where they are as safe as they would be in the distant store, and far more convenient when all are busy. Such an outfit costs some money, and the way to keep it without any waste is to use a lock and key. Then it stays, and pays a tremendous profit on the investment. The room makes a safe storage-room for empty mill-bags and many other articles in a farm outfit that have the habit of loaning themselves when the family is absent and no record can be made of their travels.

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**A MOUSE-PROOF ROOM.**—It is my experience that such a combined shop and storage-room has its value greatly increased by being made absolutely mouse-proof. I have had no difficulty on this point, by keeping the floor several inches off the ground and having the room tightly ceiled on all sides. Formerly, when a peck or more of grass-seed was left over from seeding it was wasted by another year, as the bag containing it would be found by mice or rats before a year rolled around. With a safe storage-room all seeds are carried over without any loss, and the supply is conveniently at hand. There is pleasure in having a room in which anything can be stored temporarily with safety from marauders of all kinds.

I hesitated about occupying this space telling of the obvious advantages of a workshop and storage-room that was properly fitted with supplies, because every one should know these things and have such a room without this reminder; but very many farmers show that they do not realize their value, experiencing loss of time and money

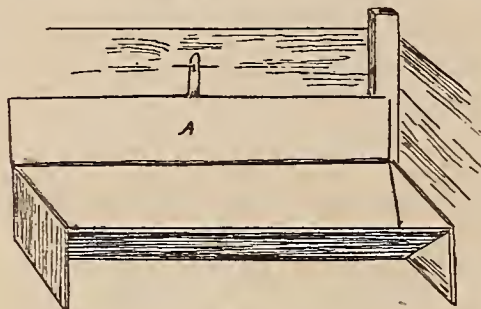


FIG. 3

and suffering many a vexation as a result. There should be a place for wrenches, hammers, ax, hatchet, saw and other tools, and a good place in which to use them; a place for a full line of little things needed in making repairs; a place for little lots of seeds, for mill-bags, tarpaulins, horse-blankets, etc., and a safe place for the many trinkets that lose or loan themselves when not in use by their owner. Such a place saves money and temper, and hence its value deserves emphasis.

DAVID.

## HOME-MADE BARN CONVENIENCES

At this season of the year there is more or less leisure among all farmers that should be devoted to making improvements indoors and out. The careful man will first of all, after the crops have been properly stored, look out for the comfort of his animals. There is hardly need for specifying what should be done in this respect, for the needs are apparent to every owner of stock; and if by chance they should be lacking in humanity the necessity for this care of stock may be found in the saving of the cost of feed, so that this should be sufficient incentive.

After the stock are well protected against cold, attention should be given to providing devices for convenience and labor-saving. There are hundreds of dollars wasted on most farms in renewing the stock of tools, food, harness, brushes, etc., that can be saved if a little time and trouble is spent at a time when it can be given without interfering with other duties. Indeed, I may go further and safely assert that in many cases the use of simple home-made and inexpensive devices will oftentimes save the money that now represents the difference between profit and loss in farm operations.

Take the barn for example. In how many farm barns in the country can be found arrangements for the care and preservation of the several tools and appliances used around such a structure? It is a lamentable fact that in nine barns out of ten the harness is thrown down in a corner, or the several pieces thrown carelessly over pegs when not in use; the brushes and curry-

combs are laid on the convenient sills of the building, eventually to find a lodging-place on the floor, and the blankets thrown carelessly over boxes or left in the wagon. Then again, how many farmers consider it necessary to have a simple harness-repairing outfit or the necessary sponges, cloths, chamois-skins, oils, soaps, etc., for keeping the harness clean and in good condition? How many of them stop to think how much dust and dirt they work into the hair of the animals by keeping brush and currycomb where they are constantly accumulating dirt? How much better to have a box like that shown in the illustration (Fig. 1) fastened to the wall at a convenient place, with compartments for the reception of different articles? The currycomb and brush can have one compartment, the sponges and soaps another, and cloths and chamois-skin still another, with smaller spaces for oils, liniments, powders and other small articles of the kind handy to have about the barn. A glance at the illustration will show that any man handy with a few tools can easily construct such a box in a short time.

Blankets are expensive, as all farmers know, and yet they are rarely properly cared for. Such is the case especially with blankets that are used over animals at night and which are likely to become more or less soiled. A couple of bannock-hooks, swinging hooks fastened to a plate, can be bought for a few cents, and are quickly fastened to the outside of the barn on the sunny side. Loop the strap on the blanket around one of the hooks, and insert the other hook through the buckle on the other side of the blanket; this fastens it securely so that it will swing in the air and dry, while the purifying sun will remove all odors and kill disease germs that may possibly lurk in the wool of the blanket. For those used during the day rig up a rack inside of the barn something like that shown in the illustration. It may be hung to the wall by means of hooks or the sides may be screwed fast to the side of the barn, as desired. Strong bean-poles may be fastened through holes made in the side pieces or simply screwed to the side pieces, as shown in the illustration (Fig. 2). This rack may be made of a length to suit the length of the poles or to accommodate a given number of blankets. When blankets are not in use hang them up to dry outside as suggested; if they are wet, then brush clean and hang them on the rack as indicated. The cost of making the rack is an hour or two of time that might otherwise be wasted. Divide that by the cost of one blanket made to last double the usual length of time, and one is getting very good pay for labor spent.

How many times last winter did you chop the ice out of the pig-trough, endangering the trough and wasting food the pigs should have turned into flesh? Of course, this state of affairs would not occur if the pigs were fed only what they would eat up clean; but the majority of us are not careful enough about this, for it is much easier on a cold winter day to dump the feed in the trough and hurry back to the warm fireside. A cover can be easily attached to the back of the trough, using leather straps for hinges, with a hasp at the front edge, a staple driven into the board of the pen, and a wooden peg thrust through it to keep it up during the day (Fig. 3). At night drop the cover down over the trough. This will prevent anything it contains from freezing very hard and keep out snow or dirt that might otherwise be blown in. Cost, one board, one hasp and staple, and about one hour of time. Saving, many pounds of meat, to say nothing of one's time in cleaning out frozen feed.

How many dents are in the milk pails and pans, as well as in the cans, if your milk is handled in that way, caused by the wind blowing them off the shelf where they were set to dry and air? Oh, yes; tinware is cheap, but can you afford to replenish the stock every few months when the money is so much needed for other purposes? Get the tools out and make a heavy table such as shown in the illustration (Fig. 4); fasten a few pegs in it through auger-holes, on which to hang cans and pails, and at one end construct a rack for the pans as indicated in the illustration. This is a little more trouble to make than the other devices mentioned, and will take a little more of your time to put it together, but you can

see how convenient it would be. While this is not strictly a barn convenience, it comes pretty close to it, and at least it would be an appliance the good wife would greatly appreciate. Just refer the plan to her for an expert opinion.

It would be possible to go on through several pages of this paper describing and illustrating devices that could be made at home with small expense, but if the few here shown will start the reader to thinking of the possibilities in this line by the exercise of a little labor and ingenuity the desired object will be accomplished.

GEO. R. KNAPP.

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## IRRIGATION BY BASINS

Basin-irrigation is an old Mexican system practised in California, New Mexico and Arizona a century ago, and still in vogue

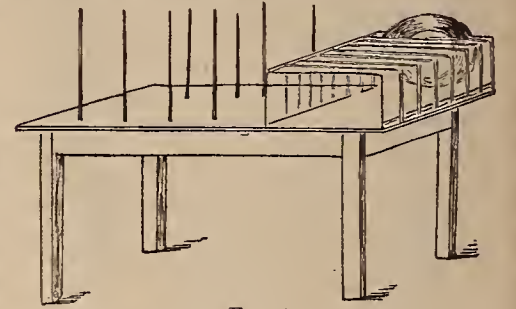
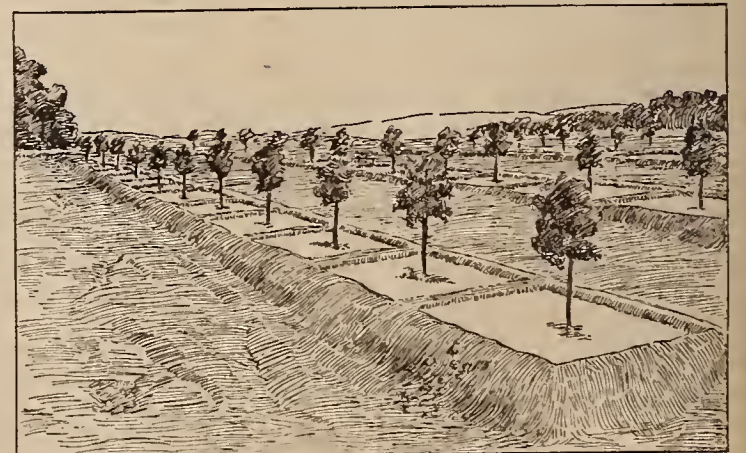


FIG. 4

among the original inhabitants. The plan is identical with ancient irrigation on the Nile in Egypt, and tradition carries the modern reader back through the Aztec ruins of South America to the primitive irrigators on the Upper Nile for the beginning of this system. When the water was muddy and the river crowding its banks the natives turned great volumes upon their land to form temporary lakes. These inundated fields would usually remain collecting silt for two or three months, when dams would be cut, the water drawn off, and seed sown in the mud. No further irrigation would be necessary, and enormous crops of everything suitable to the soil and climate were harvested.

The modern basin system differs from the ancient in the extent of the area covered with water. On the modern Mexican ranches the basins are used chiefly for irrigating fruit-trees, and the land between rows is left in its desert conditions. The basins are made with shovels, and are generally about eighteen inches deep, from four to ten feet wide, and frequently extend from tree to tree, a distance of probably thirty feet in the rows. When once completed the basins require no additional labor for a quarter of a century, except occasional shoveling of sand or strengthening the banks. The sides are often puddled with clay or adobe mud to prevent seepage, and the water is held in place by embankments of earth and stone. Trees irrigated in November and June yield handsome returns, and the mud and water from surface-irrigation are not present at harvest-time.

Water is turned into a row of tree-basins and let run until it reaches the last one on a line. Here the irrigator stands, with shovel, and when the basin is filled he throws a dam across the opening cut in the strip of soil left between the trees. This stops the water in the second basin, and when it is filled the dam is made as before, and in this manner the entire row is



IRRIGATION BY BASINS

filled with water. The water stands until it enters the soil and furnishes moisture for the tree-roots. While standing as a miniature lake around the trees the water collects the fertility from falling leaves and plants, and the natural sediment carried in solution from the mountains is deposited at the roots of the trees. While this plan is very crude and subject to many criticisms many western fruit-growers claim it is a cheap and most satisfactory method of distributing water, especially where time is under consideration. JOEL SHOMAKER.

## NOTES FROM GARDEN AND FIELD

**KEEPING APPLES.**—I have usually laid in a full supply of apples for winter use, and with apples plentiful and cheap in the fall I have never tried to be very economical in banding and saving this supply. In fact, a large portion of the apples that I and other people put into cellars and pits heretofore have invariably become useless and worthless by overripeness (another name for rot) during storage. At best the apples in the cellars had to be looked over and sorted over every little while in order to remove the rotted and specked ones and save the sound ones from contamination. This year apples are scarcer than ever, at least so far as I can remember. In this vicinity they have been picked up so closely that you could not buy fifty bushels of apples fit for cider within miles around, much less fifty barrels of apples fit for table use. Yet this is emphatically an apple country, apple orchards constituting a large percentage of the broad acres in this immediate vicinity. People, of course, are very choice with and very careful of what few apples they have left on hand for their own use. I always pick out some of my choicest apples, especially Greevings, Baldwins, Spys, and perhaps some Russets, for later use. These I put in barrels and head them up as for market. The barrels are left in some outbuilding where they are cool but well protected from freezing until Christmas. They are then taken into the coolest part of the cellar until wanted for use. If the apples were in good shape when put up, that is, not overripe, and especially entirely free from rot, specks or bruises, they will usually come out all right. People within easy driving distance of some cold-storage plant of course might have a few barrels taken and stored there until such a time as the apples may be wanted. The cold-storage company of Buffalo charges me fifteen cents a barrel for a month.

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**PACKING APPLES IN SAWDUST, BRAN, ETC.**—A writer in "American Agriculturist" recommends the plan of packing apples in sawdust for long keeping. This advice needs some qualification. I have before this entirely spoiled a lot of apples by packing in barrels with pine sawdust filling. The apples came out all right, so far as appearance and soundness were concerned, but they were saturated with turpentine flavor to such an extent as to render the fruit unfit for table or culinary uses. If my friends wish to try the plan they must be careful to select sawdust from basswood, white-wood, birch, maple or any other wood that is free from objectionable flavor. I also tried bran as a filler, but with even less success. The bran is apt to draw moisture from the fruit, especially if some specimens take a notion to become rotten, and then will heat and cook the apples, rendering them worthless. I think that clean oats is yet the best thing to fill in between the layers of apples in a barrel.

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**PACKING PEARS IN OATS.**—I have this fall packed a lot of Duchesse and Anjou pears in oats in this way. The Anjous were first wrapped in waxed paper, then in tissue-paper, and then packed in layers in kegs, with oats filled in between the layers. I have never had finer and better-ripened Anjous that I have now kept in this manner. The usual trouble was rot. A large number of specimens, and often the finest among them, would simply rot down rather than ripen, and become soft and juicy. This year I have no trouble from that source, and the flavor seems to be perfect. Whether this is in the wrapping, in the oats or in both I cannot say. I have also a lot of Anjous in cold storage in Buffalo, and on last inspection found them to be still hard and sound. They will be taken out shortly before Christmas.

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**APPLES IN BULK.**—I do not have apples enough to store in bulk in the cellar, as I had to do some years. For the benefit of the people who may have to find or make room in the cellar for a lot of apples I will state that my earlier ideas of the need of ventilation were all wrong. Apples and other fruits are better off without air circulating all around them. It is not necessary to store apples in shallow bins or layers. Mr. J. S. Woodward tells me that he stored apples in the year of the great apple crop (1896) in his cellar up to eight feet in depth, and that they kept the best where the layer was the thickest.

**STARTING A GINSENG-PLANTATION.**—Several readers of the FARM AND FIRESIDE have asked me where they can get ginseng seed or roots at a reasonable price. As I intended to set a few plants myself I asked one of the men who seemed to be so earnest in pointing to ginseng as the coming money-crop for prices on seed and roots, and was offered one half dozen fine roots by mail for \$1.50, or one fourth of an ounce of seed for seventy-five cents. He says: "Let me advise you to plant at least four ounces of seed. They will cost you \$8, post-paid. When the plants are three years old I will guarantee you two and one half cents apiece for them. There will be from 2,000 to 2,400 of them, and you can figure the profit on the investment for yourself." At the same time my friend charges nearly ten times as much as he says I will get in three years for them. It seems to me that "here is the milk in the cocoanut." Druggists' profits, indeed, and no wonder about the zeal of some of the ginseng boomers. On the other hand, for any of my friends who may wish to try their hand on ginseng (and I hope many will, at least on a moderate scale) there is no need of paying such prices. Before me is a price-list of Harlan P. Kelsey, Massachusetts, the proprietor of the Highland nursery in North Carolina, which gives the price of roots, ordinary, \$3 a hundred; larger size, \$5 a hundred; ordinary, \$25 a thousand, and of seed, \$1 an ounce, or \$10 a pound. I am told that Mr. Stanton sells seed and plants at approximately the same figures. These dealers should put, if not a standing, at least an occasional advertisement in the FARM AND FIRESIDE.

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**CRANDALL CURRANT AGAIN.**—I am asked what variety of currants will fertilize the Crandall. I don't know. At one time I thought that the cause of the Crandall being unproductive was lack of proper pollen. Yet there were other varieties standing at each side of the Crandall at the time, and now, with the same varieties side by side of them, the Crandall has set fruit very freely, as already explained in these columns. Possibly, too, the Crandall under favorable conditions will do very well when standing alone. But as I said, I do not know. Mixed plantings are always to be preferred, and while I think of it let me quote what the new monograph on bush fruits mentioned elsewhere has to say about the Crandall: "The best-known variety of this species (Golden or Buffalo currant—*Ribes aureum*) at the present time, although the plants sent under that name differ so much that they are supposed to have been only seedlings. Like the forms found in unnumbered dooryards, and everywhere known as the flowering currant, this is a tall, vigorous, upright bush. Although apparently productive, the average yield to the bush at the Geneva, New York, station for three years was less than one pound. The fruit has a tough skin and such peculiar flavor that it is little prized."

T. GREINER.

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## TRANSPLANTING LARGE TREES

It is sometimes desirable to go to considerable trouble and expense in order to transplant very large trees in cases where immediate shade is required. Deciduous trees of almost any size can be successfully transplanted if proper precautions are taken. The size of the tree to be moved is limited only by the appliances for moving. It is usually best and most economical to transplant trees of medium size, such, for instance, as two men can lift, but in case very large forest or other trees are to be moved certain rules must be observed.

The illustration shows the top growth and an outline of the root system of a tree. In moving such a tree the roots will be cut as indicated by lines; in order, therefore, to properly balance the two systems, it will be necessary to severely crop back the limbs. While in digging up a tree for transplanting a great many roots will appear to be secured, it must be remembered that in most trees the roots project laterally in all directions approximately the distance from the base of the trunk as is the height of the tree. It is therefore seen what an immense root system each tree has and what a small proportion is preserved in transplanting. Best results always come from very severe pruning of the tops. If pruned but little, even if the tree lives, the new growth will never be so vigorous, for the shortened roots will be constantly overtaxed to sustain such an excess of foliage.

The writer had occasion some years ago to transplant a large elm-tree to supply shade for the kitchen, where a tree had been killed by a horse girdling it. The tree transplanted

was fifteen inches in diameter a foot from the base, and has grown so vigorously that I will describe the method employed in moving it. As I was extremely anxious to promote successful growth, not only for the sake of the shade, but because various neighbors had laughed at my suggestion of transplanting such a tree, I did everything possible to insure the same. Commencing operations in the fall, before the ground had frozen hard, I dug a hole eight feet in diameter and three feet deep to receive the tree, throwing out the stones, and then hauled two cart-loads of rich earth and several of year-old manure to use in planting. Toward spring I proceeded to move the tree. I ran a circle about it something less than six feet in diameter, and outside of this dug a ditch nearly four feet deep. The first few inches were frozen and made hard digging, but the roots were brittle and cut easily with an old ax. Below this the digging was easy. This, of course, left nothing holding the tree but the large tap root or roots. As I proceeded downward I dug inward toward these roots, finally pulling the tree over with a rope attached to its limbs, and cutting them. I then sawed the limbs off carefully,



as shown in the illustration, and shaved down the ball of earth to the form of an inverted cone. By the following morning everything was frozen solid, and the tree could be tumbled about without danger of losing earth. Quite a problem was presented in getting it out of the hole, as I had no lifting power, but this was accomplished by cutting away one of the sides of the hole and rolling and sliding it out with the power of four horses. As I had over a quarter of a mile to move it, and had no means of getting it into a wagon, I constructed a rough sled of two-inch planks on which it was rolled and to which the four horses were hitched. I judged that the tree and earth weighed about one and one half tons, and consider it was the very heaviest weight that could be handled in this way without a derrick and tackle. The load was hauled to the hole made ready for it, slid into the exact spot desired by means of boards, and propped up. I had previously mixed the two cart-loads of rich dirt with the surface dirt taken from the hole, and had this in a separate pile covered with straw to prevent freezing. This was now shoveled in around the roots, and packed well down to avoid leaving air-holes. Care was taken to see that fine unfrozen dirt was placed next to all roots, and the outside space was filled in with the frozen lumps. Then, as a double precaution, straw was placed around the tree. As the ground thawed the lumps were packed together and all interstices filled. Finally, as soon as the weather warmed up a little and the buds on trees began to start, the ground was thoroughly soaked and "melted together." This is very important in transplanting large trees—to see that the ground is well firmed all around the roots to prevent any possibility of their reaching air-holes. Several barrels of water were put around this tree until it stood in a pool around its base. Its buds started as early as the earliest elms, and during its first year in its new quarters it made a dense growth of new twigs, completely covering the cropped limbs.

During the driest summer weather it was watered a number of times, care being taken to see that the earth did not dry out. The second year its shoots made a growth of over three feet, and the third year it hardly showed the effect, while in foliage, of having received any pruning. It has been kept well cultivated, a circle around it sixteen feet in diameter being spaded and hoed as often as corn is cultivated, and kept top-dressed with manure.

GUY E. MITCHELL.

## SEEDLING APPLES

In southeastern Virginia, where apple brandy was formerly a leading product of the farms, it was the general practice to grow seedling apples instead of grafted apples for cider-making. There were four things to favor this custom: seedling apples make the best cider, and more of it; it took less time and trouble to get trees into bearing; the trees were longer lived and more productive, yielding fruit every year, and there were no commercial nurseries from which to obtain grafted stock. There were extensive apple orchards all over the land, for every farmer made brandy, and nine tenths of all the apple-trees were seedlings.

Of course, there was a great variety in the quality and size of the fruit, and the majority was entirely worthless for anything save cider. If the farmer wanted a little fruit for eating or pies he would graft a few of the seedlings with scions from some approved kind. The grafted sorts in those days were mostly Codling, Gregory, High May and Red June, and for late kinds Giles, Father Abraham and Simon.

Every farmer grew his own apple-trees. It was simple enough. A quantity of pomace was taken from the presses and sowed along in drills made by a plow in the nursery, and covered with a little soil. The pomace contained plenty of apple-seeds, and the next spring the young trees appeared, and had to be thinned out to a proper distance apart. Very little attention was given them in the way of pruning, and the following fall or spring the thriftiest trees were set out.

It was the best system to follow for the purpose for which apples were then wanted—cider; and the point we make is that it is the best plan now for the same purpose. In this way, too, one occasionally secures a valuable apple for dessert or market. In fact, all the varieties come in this way, and the grower of seedling orchards has the chance of securing an important find by this plan. The method has a good deal to recommend it, and there is a sort of fascination in growing a fruit of an unknown quality for the mere pleasure of seeing what it will turn out to be.

B. W. J.

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## VARIETIES ADAPTED TO CLIMATE

A few years ago Professor Budd, of Iowa Agricultural College, began a series of experiments on the adaptation of trees and plants to different climates in our western states. He opened the way to a series of experiments of great value. In Canada there are established quite a number of experiment-farms, the object of which is to extend as far as possible the cultivation of cereals and fruits under conditions supposed to be unfavorable. The object is to ascertain what varieties of wheat, oats, barley, peas and fruits yield the best crops under specific conditions of climate, soil and exposure. This is particularly important in order to establish the comparative value of fodder grasses. Meanwhile, in carrying out these experiments allied experiments naturally follow in the way of cross-fertilization and the establishment of new varieties better qualified to endure the climate. Professor Budd traveled extensively over Asia and Europe, and succeeded in introducing a large number of very hardy fruits and grains from Russia and Siberia. He has also been able to originate for us other varieties by scientific methods, which are equally useful. It is probable that these experiments will prove to be of quite as great utility in the warmer belts of the country as in the colder. It is probably just as true that the apple can be carried south as that the peach can be carried north.

E. P. POWELL.

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## HOW TO FIX 'EM

BY E. D. S.

If the codling-moth you'd kill,  
Cherry-slugs or caterpillars,  
With Paris green your spray-pump fill,  
And quickly dose the little sinners.  
Spray 'em!

When by the plum-curculio  
Your fruit is badly injured,  
Hit the trees a sharp, quick blow,  
And carefully gather all the captured.  
"Jar" 'em!

You will find a good concoction  
For plant-lice, scales and other bugs  
Is a kerosene emulsion  
Or some irritable drugs.  
Spray 'em!

Should borers in the peach-trees  
Make them look as does the "yellows,"  
Get right down upon your knees  
And ferret out the naughty fellows.  
"Worm" 'em!

But when the scale from San Jose  
Your trees has well incrustured,  
Or if the bark's been bored away,  
And by the beetles badly worsted,  
Then—burn 'em!

**COLOR AND FLAVOR** of fruits, size, quality and appearance of vegetables, weight and plumpness of grain, are all produced by Potash.

## Potash,

properly combined with Phosphoric Acid and Nitrogen, and liberally applied, will improve every soil and increase yield and quality of any crop.

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## FARM LIFE IN HUNGARY

(Continued from page 3)

bage soup, pig sausage, smoked bacon rolled in red pepper, which is called slanina, and cakes and some more whisky, and then there is a helpless muddle of fighting men and crying women and screaming infants, and the first morning of the honeymoon breaks, and dishes are broken, and heads, also; but the guests go home vowing that they had a good time.

The poorer classes of land-laborers are badly paid and live scantily. They earn on an average fifteen cents a day. A hired man as strong as an ox can be hired for thirty-five dollars a year. His board cannot cost very much. In the morning he gets a slice of rye-bread and soup; at noon, soup, cabbage or beans and rye-bread, and in the evening rye-bread without any soup. Once a week he sees meat, and then only a small portion of it.

The following incident will show how meat-hungry these poor people are: A pig died of the hog-cholera and had to be buried with lime and coal-oil, this being the law. In the morning the grave was found empty, the carcass gone, and made into unrecognizable sausage.

The peasants were, until a few years ago, very illiterate, and even now never read a newspaper. Yet they are a strong, honest



HUNGARIAN FARM-HOUSE

set of people, with strong love of liberty. The government of Hungary is very liberal, and it is to-day one of the most flourishing countries of Europe. It was made what it is, not by its kings, its nobles or its soldiers and merchants, but by its honest, industrious peasantry.

## CORN IN VIRGINIA

The yield of corn throughout Virginia, in fact, wherever "corn-dodgers" are an indispensable adjunct of almost every meal, is estimated by barrels instead of bushels.

The original standard barrel is made large enough to hold as much as three ordinary flour-barrels. It is usually an iron-hooped one, having handles a little above the middle, so that two men can carry and empty it easily. The contents of such a barrel of ordinary corn will yield, when shelled, about five bushels. A variety of corn having a very small cob and deep, long grains yields more nearly six bushels, so the seller is the loser and the buyer the gainer.

The time-honored method of blading and topping corn is rapidly being superseded in Virginia by the northern one of cutting and shocking the crop. It has become evident that the old method requires so much time and labor that it is by no means the most profitable one.

In the North the outside covering of the corn is called the husk; but in the South the cob is called the husk, and the outside covering of each ear is called the shuck. In the South the leaves below the ear are called blade fodder, and the stalk above the ear is called the top fodder. After being bladed and topped, and the corn well ripened, it is snapped off and stored with the shuck on. The reason being the corn-weevil does not work on the corn so much, and when left in the shuck the rats eat but one ear at a time, therefore do not shell off much more than they eat. More than this, it is claimed that where the shuck is left on, the meal made from it has the fine flavor of that first made from the new crop. Why not export corn in the shuck? If this would prevent the bitter or musty taste which bulk

meal and even shelled corn takes on during its shipment abroad it would be of great advantage in promoting its more extended use. The shucks could be used for the making of mattresses or could be ground with the cob into rough feed for stock.

Experience has demonstrated the fact that all of the many eared varieties of corn, such as Cook's Prolific, which produces from two to seven ears to the stalk on the rich bottom-lands of the James river, should not be planted on thin uplands with the expectation that a large crop can be grown of this variety. A more profitable variety on such lands would be one that produces from one to two ears to the stalk, such as the Gentry, the Hickory King, white varieties, and the Golden Dent for a yellow variety. The Gentry is one of the earliest-maturing sorts, and can be planted in central and southern Virginia in July and mature before the coming of frost. Virginia-grown corn for seed has proved to be greatly superior to that grown in the North. The Hickory King is much admired on account of its deep, long grains and its unusually small cob.

The old method of ridging up both corn and tobacco at the last flowering and leaving a deep furrow between the rows is giving way to some extent to more level culture. In most cases, however, after the dirt is thrown up to the rows with a bar-share plow, the middles are cleaned out with

a five-toothed cultivator, which to some extent modifies the old objectionable method.

In using commercial fertilizers (and very few attempt to grow a crop without them) it has been found that they cannot be used to the greatest profit in the growing of a corn crop. One of the best methods of corn culture on the uplands is to drill in the fertilizer instead of putting it in the hills where the check-rows cross. The advantage in drilling in the fertilizer with the corn is that in case a dry spell sets in soon after planting the corn is not quite so liable to be injured

as when an equal quantity of fertilizer is used in the hill. Where one wishes to incur as little expense for fertilizers as possible, the best way is to use, say one hundred pounds to the acre, using a handful to four hills. Mr. G. C. M., who follows this plan, says that the application of this amount very nearly doubled the crop of fodder and of ear corn, showing the manifest advantage of using fertilizer on thin upland soils.

There is a right and a wrong way of grinding corn. Be sure and have the miller grind the corn "sharp," so that when you rub the meal with the fingers it will feel like sand instead of like flour. Corn should be well dried before being ground, but not kiln-dried.

W. M. K.

## NOTES FROM CORRESPONDENCE

FROM MICHIGAN.—The upper peninsula of Michigan is generally thought of as a distinctly mining and lumbering country, unfit for farming. This is not so, for although the chief source of wealth is in the iron and copper mines there is a great deal of farming done in upper Michigan. The climate, of course, is not the ideal one for the agriculturist, but it is nevertheless healthful. We have plenty of rain in the summer and no lack of snow in the winter. Occasionally we have some very hot weather in summer, but the air is generally fresh and invigorating. The snow begins to fall in November, and is gone by the first of April. Crops are put in in the latter part of May and are harvested before October. The leading crop cultivated, and for which, in fact, the Lake Superior country is noted, is potatoes. A few years ago we used to buy potatoes from Wisconsin, but now car-load upon car-load are sent every year to the eastern states. The potatoes are very good in quality, and yield fairly well, but this year the crop was rather scanty. Hay was plentiful this year, and oats and rye did well. Apples are easily grown here, and raspberries and blueberries grow in profusion in the woods; thousands of bushels of the latter being gathered every year.

Negaunee, Mich.

J. L.

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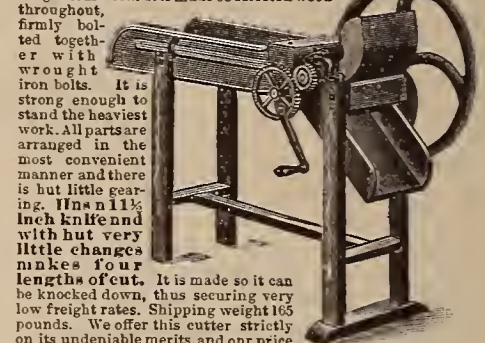
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## HORSE-HIGH

nurseries and orchards, and 12c. for a good hog fence. We sell you plain, coiled spring and barbed wire direct at wholesale prices. Don't buy wire or fencing until you get our free catalogue. We will save you money on all orders.

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is often enough to do some things. It is often enough to buy a wagon if you buy the right kind. The

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lasts that long under ordinary conditions. First the life of a wagon depends upon the wheels. This one is equipped with our Electric Steel Wheels, with straight or stagger spokes and wide tires. Wheels any height from 24 to 60 inches. It lasts because tires can't get loose, no re-setting, hubs can't crack or spokes become loose, felloes can't rot, swell or dry out. Angle steel houses.

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just "beat all" for cutting all kinds of roots for live stock. They shake out all the dirt and leave only clean and palatable food. Don't slice or cube the roots but leave a half round chip that can't choke anything. Four sizes, hand and power. Write for introduction price. **O. E. THOMPSON & SONS, 12 River St., Ypsilanti, Mich.**

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crush the corn husk, cob and all, and grind it into meal. Saves time, labor and money. For steam power, other styles for horses. Our prices will suit you. Write for them and free catalogue. **FOOS MFG CO-Springfield, O.**

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Cuts all kinds of roots and vegetables fast, fine and easy. Makes hens lay, broilers grow and fattens ducks. Our booklet **WINTER EGGS** tells all about it—sent free. **O. E. Thompson & Sons, 12 River St., Ypsilanti, Mich.**

## THE PURIFICATION OF CISTERNS

It is no rare experience that water shut away from the air will become unfit for use, hence it is necessary to keep it exposed to air to secure its purity.

The water of most deep wells retains its purity indefinitely, or at least for ages. It does not become what is called contaminated so easily as cistern-water, the latter being a recipient of impurities from a variety of sources.

The offensive odor which is so frequent from cistern-water arises from the rotting or decomposition of animal and vegetable matter, and from gases in the water. Such gases generally originate from Algae, a low order of plants always growing in surface-water. Different forms of these plants emit different odors; some, but not all, are harmless to man and to animals.

When water in a cistern becomes offensively odorous, aeration, or forcing into it as much as possible of fresh air, is productive of good results. Water impregnated with sulphurated hydrogen, having an odor similar to that of rotten eggs, may be freed completely from this gas by aeration by stir-



WATER BACTERIA (HIGHLY MAGNIFIED)

ring. So, also, from the odors produced by Algae. But the aeration of water containing rotten organic substances (so-called nitrogenous matter) will not gain in quality by the expulsion of possible gases. To secure fitness of such water for drinking purposes a treatment with alum or purification by filtration and boiling are necessary.

Artificial chemical processes have long been used to clarify or purify water. The waters of the Nile, Ganges and the Tiber were purified centuries ago by the use of certain bitter vegetables. The Canadians have long been accustomed to purify rain-water by adding three ounces each of pulverized alum and borax to every barrel of water used for drinking. In impure water—and rain-water is scarcely ever pure until the rain has fallen for a considerable length of time—alum will produce a precipitation, or settling to the bottom, of the impure matter, the water above remaining clear.

The most common process is that of agitation, in which many methods are used. That of a leafed branch of a tree is a familiar one. The chain pump and a modification of that, having small buckets, the bottoms of which are perforated with small holes, are also useful.

If, however, the condition of the cistern is such that more effective means must be employed, alum does excellent service. Any supply of water can, with the use of alum and proper aeration, always be kept pure and wholesome.

J. CHRISTIAN BAY.

## STAINS OF FRUIT-JUICE

Which often refuse yielding to soap and brush can be easily removed in the following manner:

Spread the stained cloth over a wash-basin, and pour from a kettle a stream of hot water down over the colored spots until every trace of the stain has disappeared.

This method succeeds best when the stains are fresh, but even old blots may sometimes yield to the water.

J. C. B.

## THE POULTRY-YARD

Conducted by P. H. Jacobs, Hammononton, N. J.

## GREEN BONES AS FOOD

THE value of a bone-cutter exceeds its cost if the cutter is used only one season, but as they are almost indestructible they will last for years.

Fresh green bone is almost of itself a complete food, and may be used as a special material for egg production. While the proportion of moisture in bone varies, it is in but small amount in bone compared with some other foods. The moisture in bone may be set down at about thirty-five per cent, or a little over one third. Bone contains about twenty-two pounds of mineral matter in one hundred pounds, twenty pounds of fat and twenty pounds of albuminoids. The mineral matter (or ash) contains about eighty-seven pounds of phosphate of lime in one hundred pounds, eleven and one half pounds of carbonate of lime and a small proportion of earthy matter. Now, any one can easily notice that a bone is one of the best foods for producing eggs, as the fat assists in forming the yolk of the egg and also in sustaining the fowl in winter when the weather is cold. The albuminoids provide the albumen for the eggs, and the carbonate of lime forms the shells, while the phosphate of lime is an ingredient of the eggs and is also just the thing to feed to growing chicks to make them grow. Then there is more or less adhering meat to green bone which is highly nutritious and very favorable to the production of eggs. There is no necessity for feeding oyster-shells to provide lime for the egg-shells, as the bone contains carbonate of lime in sufficient proportion for that purpose. Bone is digestible and is a food, yet it also serves as grit; but in that respect no claims are made for it compared with hard, sharp grit. Do not confound green cut bone with ground bone or bone-meal. The one is dry and hard, the other is juicy and succulent. Another point is that a bone-cutter is not a bone-mill. The bone-cutter does not grind, but cuts (as fine as may be wished) both dry and green bones, but a bone-mill will only grind dry bones, as green bones are not sufficiently brittle to be ground. The way to feed green bone is to give it in the morning, about a pound to a dozen hens (some give an ounce to each hen, or a pound to sixteen fowls), then give no other food until night, but let the hens scratch and work. Two or three times a week half the quantity of bone may be used, giving also cut clover, ground foods, etc., but always give a full meal of whole grain at night, as too much soft food is not conducive to thrift.

## WARMTH AND EGGS

Heat is produced from fuel, and it will cost more to produce warmth on cold days than in summer. While it is not necessary to feed the hens in summer, if they are on a range, they will in winter need fuel to provide warmth, and the fuel in the case of fowls is given in the form of grain. The lower the degree of temperature the greater the heat necessary to counteract it, and the warmer and more comfortable the poultry-house the less corn will be needed for the fowls. What the fowls prefer is protection from cold winds. A flock may thrive in an open shed facing the south if the northern side of the house is tight, but the moment a crack opens in the wall or the cold air comes down over the fowls they will be as much exposed as though not sheltered. To get eggs in winter a warm house free from drafts is absolutely essential.

## CHRISTMAS SALES

A word or two in regard to selling fowls during Christmas may be of assistance. It is safe to claim that while you are sending off your turkeys and other fowls to be sold about the end of the year, in the belief that prices will be good, every other person will be of your opinion and the market will be crowded. That "great minds run in the same channel" is apparent every year about this time, judging by the abundant supply of poultry that finds its way to the large cities. Only that of the highest quality is sold at remunerative prices, and it is better to keep the poultry at home to be consumed than to send it off only to be sacrificed. After Christmas, however, there is usually an immediate reaction. The market soon becomes depleted of stock, and prices gradually advance; hence, do not sell until after the first week in January, and do not be afraid to wait a week or two longer, if nec-

essary, as prices will not be lower until June. Frozen stock goes off rapidly from November to February, and there is not a great surplus from which to draw. One point in marketing fowls is that no matter how overstocked the market may be choice poultry will be in demand, but as every customer regards his shipment as consisting of the best there is much disappointment. To avoid this be sure to send only fat, fresh and plump fowls to market. Better keep them and feed them longer than to sell them in poor condition, as five cents' worth more of corn may add from twenty-five to fifty cents to the value of each fowl.

## TABLE-FOWLS

When the object is to have choice table-fowls for home use (not for market) get Langshan hens and mate them with Dorking or Indian Game males. Do not keep any of the young stock, either pullets or cockerels, as the pullets will not prove as good layers as their dams. The Langshan is itself a fine table-fowl, and the hens are prolific layers, but the Indian Game or Dorking male improves the quality of flesh in the chicks, and produces something excellent that cannot be purchased in the market. The Langshan is also a very hardy fowl, but Dorking or Indian Game chicks are not as easily raised as some others until they are three months old, but after that period they are like young turkeys—hardy and able to easily care for themselves. For market the best chick is the one that is hardy and most easily raised.

## SOFT FOOD AND DISEASE

There is a partiality for soft foods, because by their use many substances in a fine condition can be given; but it is a mistake to feed soft food oftener than once a day to three days in the week. Too much soft food causes the gizzard to be idle, and being deprived of its use the fowl becomes diseased. The gizzard is an organ that performs a certain duty, just as is required of the heart or liver, and any system of feeding that takes largely from the gizzard the duty which devolves upon it will in the end prove detrimental. It is not out of place to allow soft foods, but the larger proportion of the food should be unground, so as to keep the gizzard active; hence whole grains are essential to success. When too much soft food is allowed the crop frequently remains full and food does not pass through the gizzard.

## BROILERS FOR SPRING

Broilers may be hatched as late as March, but the earlier the better, as it is the early chicks that bring the high prices. Large numbers cannot be raised by hens at this season, as hens will not sit until they are so inclined; but there are many makes of incubators on the market, and they have long ago passed the experimental stage. Artificial incubation is now an accepted portion of poultry-raising, and incubators are essential to success in getting broilers to market in time for high prices.

## INQUIRIES ANSWERED

**Ducks and Drakes.**—J. W. R., Alton, Ill., writes: "I have a flock of about thirty ducks, and wish to buy drakes for new blood. How many males should I buy?"

REPLY:—The rule is to allow one drake with six females, but an extra drake should be purchased in case of loss by death.

**Brown Leghorn Male.**—Anxious Reader writes: "My Brown Leghorn male does not go on the high perch, is weak in the knees, but otherwise healthy. He has had free range."

REPLY:—He is too fat. Give no food except an ounce of lean meat once a day for two or three weeks.

**Clover Hay.**—B. L. L., Danville, Va., writes: "How is clover hay prepared for feeding fowls in winter, and how often should it be given?"

REPLY:—It is cut very fine, scalded at night by pouring boiling water over it, allowed to remain until morning, and then given three times a week. It is improved by sprinkling bran and corn-meal over it.

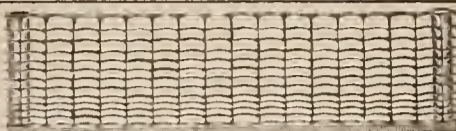
**Yarded Fowls.**—G. L. C., Seattle, Wash., writes: "My hens have diseased livers. They are kept yarded, but are let out on grass an hour in the evening. They are fed on scraps, grain, etc. Some are free from the difficulty."

REPLY:—They have been fed on too much grain during warm weather, and require more exercise. The only remedy is to so feed as to have them hungry in order to induce them to scratch. Give no food for forty-eight hours, and then only one meal a day (at night) for a month.

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## QUERIES

### READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

**Best Fertilizer for Potatoes.**—J. A. McC., Watsonville, Cal. On this question I will write more at length in one of the next issues of FARM AND FIRESIDE. Briefly I would say that I know of no better fertilizer for the Irish potato than six to ten pounds of clover-seed to the acre, the young clover to be well fed either with a coat of stable manure or with a few hundred pounds each of superphosphate and potash, then allowed to grow for one crop of hay and a second crop for plowing under.—T. GREINER.

**Heating Milk and Removing Odors.**—G. R., Nantamo, B. C., Can., writes: "Can milk be heated enough to keep it from souring without giving it a scalded taste? Will any process remove odors from milk?"

REPLY:—Yes. If milk is carefully heated to one hundred and fifty-five degrees, Fahrenheit, or even a little higher, the boiled flavor or scalded taste is scarcely perceptible. If milk is kept at this temperature a few minutes the lactic acid bacteria, which cause the souring of milk, will be killed. Both aerating milk by passing it over a cooler and heating it drive off odors, but do not purify tainted milk.

**Hen Manure and Lime.**—"Ignoramus" writes: "My garden is a sandy loam. I keep my hen-house well littered with pine and oak leaves, using two or three loads each year. This with the droppings I spread broadcast over my garden. I have luxuriant potato-vines and corn-stalks, but my potatoes and sweet corn are not up to expectations. What ought I to do: use lime or kainit? I use all my wood ashes, but as I burn pine they are of little use. I am using lime in my hen-house. Does it release the ammonia?"

REPLY BY T. GREINER:—Hen manure is usually a good garden manure, being very rich in nitrogen, and may in some cases give an excess of foliage to the expense of tuber, grain or fruit. Kainit is a good addition to hen manure, as it adds potash and aids in retaining ammonia. Additional applications of superphosphate (dissolved phosphate rock) may be needed in order to increase the yield of tuber or grain. Lime and ashes should not be mixed with the poultry droppings. They will release ammonia. Ashes of pine or other soft wood are all right, too. Possibly they may not be quite as rich in potash as hard-wood ashes, but they have nearly as much and enough in any case to make the ashes worth saving and applying.

## VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

To G. W. Smith, Manchester, N. Y. The information you desire you can best obtain if you write to the "Bureau of Animal Industry," in Washington.

**So-called Scratches.**—J. L. W., Bourbon, Mo. Make twice a day to all the sores a liberal application of a mixture of liquid subacetate of lead, one part, and olive-oil, three parts, keep your horse on a dry and clean floor, and keep out of mud, water and manure.

**Probably Defective Molars.**—J. H., Wharf, N. C. The inability of your mule to masticate hard corn is probably due to one or more defective or diseased molars and not to succulent gums, or so-called lampas, which is not anything morbid, but only an imaginary disease. Have the teeth of your mule carefully examined and the cause of the difficulty will undoubtedly be found.

**Probably So-called Blind-staggers.**—S. H. F., Gossett, Ill. Your neighbor's mare probably died of so-called blind-staggers, an incurable disease caused by pressure upon the brain tissue. In a majority of cases this pressure is produced by an abnormal accumulation of serum or maybe exudates in the ventricles of the brain. A carefully conducted post-mortem examination would have revealed the cause of death.

**Possibly a So-called Quitter.**—F. H., Atwood, Kan. What you attempt to describe may possibly be a so-called quitter, or fistula, in the cartilage of the hoof, but this is only a

guess. Your attempted description is too vague to base upon it any diagnosis. I therefore advise you to have your horse examined by a veterinarian. If it is a quitter the treatment at any rate will require a surgical operation.

**Incontinence of Milk.**—W. K. B., Cold Spring, Ky. Incontinence of milk is due either to a lack of energy in the contractile fibers which close the opening of the teats, to too much pressure caused by an undue accumulation of milk in the milk-cisterns, or to both causes acting together. The simple remedy, usually sufficient, consists in milking three or four times a day instead of twice, and only if this proves to be insufficient to enable the cow to retain her milk from one milking-time to another, astringents, for instance, a decoction of oak-bark, may be applied to the ends of the teats. It will, however, seldom do much good if the cow at the same time is fed with relaxing, watery, soft and sloppy food. If the latter is the case it will be necessary to change the food to good hay and grain.

**Frequent Attacks of Colic.**—O. M. S., Yutan, Neb. If your horse has an attack of colic about every ten days the cause very likely consists in the presence of an aneurism in the anterior mesenteric artery, or of some other abnormal condition in the intestinal canal which cannot be removed. As a means of prevention, all one can do is to feed regularly and only such food as is comparatively easy of digestion, to give pure water to drink, etc., as you say you are doing, and to see to it that the animal is not bitched up for hard work immediately after having eaten a heavy meal, but is first allowed about two hours' time for digestion and is not at once fed a heavy meal when coming home from hard work. A horse like yours will sooner or later succumb to one of these attacks, but nothing to prevent them can be accomplished by any medicinal treatment.

**So-called Lampas.**—J. C. K., Summer-ville, Pa. You are right: there is no such a disease as lampas. Whenever the gums of a horse are swelled, the swelling is simply a concomitant or some other usually morbid process, unless it be that the gums have been wounded by some external causes. Swelled gums may be observed in cases of gastric disorders, in certain infectious diseases affecting the whole organism; further, a swelling of the gums may be caused by congestion in consequence, or as a concomitant of existing morbid processes affecting the teeth, or of the presence of a morbid growth in the cavity of the mouth or in adjoining parts; and finally congestion, and, in consequence, some swelling of the gums is sometimes observed when the permanent teeth, particularly the permanent molars, are cutting through.

**Swollen Leg.**—J. H., Foxton, Mau., Can. Wounds on a horse's leg below the so-called chestnut, or horny part, unless brought to a healing without any suppuration (by first intention), always leave behind a more or less conspicuous or ugly horny scar and more or less swelling. The former, although in time perhaps getting somewhat smaller, is permanent, and of the latter only as much as will temporarily disappear if the horse is exercised can be permanently removed by exercising the horse during the day, by rubbing down the swelling in the evening, and by putting on a good bandage of woolen flannel, to be kept on over night. Next morning, after the bandage has been removed and the leg has again received a good rubbing (this is best done with the palm of the hand), the horse should be exercised. This treatment is to be continued until the leg does not swell any more during the night if the bandage is left off.

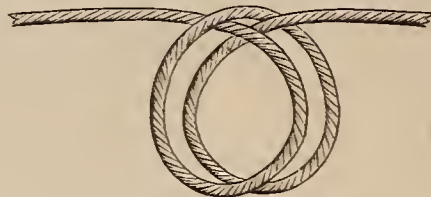
**Indigestion and Diarrhea.**—W. B., Ridge Road, N. Y. Your calf suffers not only from diarrhea, but also from chronic indigestion. I do not regard the prognosis as favorable in such a chronic case as yours; still, if you value your animal and wish to make an attempt to restore the same to health, you may give once a day for a few days in succession ten grains of opium, one half of a dram of powdered Russian rhubarb (radix rhei), two scruples of carbonate of magnesia and five or six ounces of camomile-tea as a drench, to be given slowly and in a gentle manner. But before you go to any expense I advise you to make some inquiries about the health of the dam and of the sire of your calf. Without saying any more I suppose you will know what I mean by this latter advice.

**Infectious Abortion.**—J. R., Glen Este, Ohio. What you describe appears to be a case of infectious abortion. I would advise you to remove at once all such cows as are yet with calf (have not yet aborted) to some other non-infected place, and to keep them there until they have calved. This done, subjoin the premises, stable and barn-yard on which the cows have aborted to a thorough cleaning and disinfection. Inject into the vagina of the animals that have aborted a solution of corrosive sublimate, in water, in the strength of 1 to 1,500 or 2,000, wash the external genitals and the tails of the same animals with a solution of corrosive sublimate in water in the strength of 1 to 1,000, and repeat this operation a few days in succession. If another case of abortion should occur, burn the fetus and the afterbirth, inject

a blood-warm solution of corrosive sublimate, 1 to 1,000, into the uterus of the cow, and wash the external genitals and tail of the animal as above stated. By doing all this you will very likely succeed in freeing your place from future cases of infectious abortion.

**Wounded by a Rusty Wire.**—R. H., Genoa Junction, Wis. You say your cow was wounded by running a rusty wire into the fetlock, that you applied tar and it healed up, but broke open again and suppurated, that then you poulticed the sore for three weeks, that now it has been healed for four weeks, but that the cow is yet very lame. The probability is that when the wound healed the first time a foreign body, perhaps a small piece of the rusty wire, which afterwards caused renewed suppuration and the breaking open of the superficially healed wound, remained within the wounded tissues. Then the suppuration and the continued poulticing may have removed the foreign body, but produced at the same time morbid changes possibly within the joint which now constitutes the cause of the lameness. The prognosis, as far as the lameness is concerned, will be somewhat more favorable if the foreign body has not been removed, if its presence constitutes the sole cause of the lameness, and morbid changes affecting the pastern-joint are not existing, for then the wound sooner or later will open again, and then it may be possible to remove the foreign body by surgical means, to clean the wound and to bring it to a permanent healing.

**A Large Wart.**—M. M. D., Long Beach, Miss. As the large wart on the side of your calf, according to your description, has a plainly developed neck, the best way to remove it will be by means of a ligature passed around the neck of the wart as close to the body of the calf as it can be done. There are two ways to do this, both equally effective. One is to procure a good "waxed-end" a yard long from a shoemaker, make in the middle a double noose, as shown in the illustration, to slip this over the wart as close to the body of the animal as possible, and then to draw it as tight as it can be done. Such a noose has the great advantage that it can be retightened whenever the tissues begin



to shrink, and to enable one to draw it very tight in the beginning it is advisable to fasten to each end of the "waxed-end" a small wooden stick for the purpose of having a good hold. The other way is to use an elastic ligature. An end of thin rubber tubing is stretched out to the utmost, passed around the neck of the wart as close to the body of the animal as possible, and then tied while being kept in the stretched-out condition. Such an elastic ligature tightens itself by its own elasticity when the tissues begin to shrink. That the rubber tubing (about three sixteenths of an inch external diameter will be the proper size, and one and one half feet about the right length) must not be old and damaged, but possess all its natural elasticity, is self-evident. If either kind of ligature is properly applied the wart will soon drop off and the wound that is left will be very small and insignificant.

**Probably Botriomycosis.**—E. F. L., Sedro, Wash. What you describe is probably a case of botriomycosis, more frequently of late among horses than it used to be. Get in a reliable drug-store the following prescription made: R. Acid. arsenicos unc. one half, Potass. caustic. fus. dram 2, Pulv. gummi. acaciae unc. one half, Aq. distill. unc. one and one half. Misce fiat lium. To be dispensed in a salt-mouthed vial, and signed, "Poison! For external use." Having procured this very poisonous and caustic medicine, prepare a wood spatulum, just wide enough to go into the mouth of the vial, but not much more than one eighth of an inch thick, and having a handle of convenient length. Dip your spatulum into the vial and smear what will adhere to it over the surface of the morbid growths; repeat this until the surface of each is coated with a uniform thin layer, just thick enough to fairly cover the surface, but be careful not to bring the canister into contact with anything else, neither with your hands nor with the healthy skin of the animal. Having thus coated the surface of the growths, cover each of them with a thin layer of absorbent cotton, and then tie the animal in such a way that the same cannot reach any one of the morbid growths with its mouth. If the operation is carefully performed, and the animal is effectively prevented from disturbing and irritating the morbid growths, nothing more will be required except cleaning the stall in a thorough manner at least once a day, and to provide clean bedding, if possible, of sawdust instead of straw, for it is supposed that the botriomyces which cause the trouble are often present in the straw and thus introduced into small sores or lesions. If, after the growths have dropped off a sore should remain, you may dress the latter twice a day with a mixture of equal parts by weight of iodoform and tannic acid.

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There is often a foul taste in the mouth, coated tongue, and if the interior of the stomach could be seen it would show a slimy, inflamed condition.

The cure for this common and obstinate trouble is found in a treatment which causes the food to be readily, thoroughly digested before it has time to ferment and irritate the delicate mucous surfaces of the stomach. To secure a prompt and healthy digestion is the one necessary thing to do and when normal digestion is secured the catarrhal condition will have disappeared.

According to Dr. Harlandson the safest and best treatment is to use after each meal a tablet composed of Diastase, Aseptic Pepsin, a little Nux, Golden Seal and fruit acids. These tablets can now be found at all drug stores under the name of Stuart's Dyspepsia Tablets, and not being a patent medicine can be used with perfect safety and assurance that healthy appetite and thorough digestion will follow their regular use after meals.

Mr. N. J. Booher of 2710 Dearborn St. Chicago, Ill., writes: "Catarrh is a local condition, resulting from a neglected cold in the head, whereby the lining membrane of the nose becomes inflamed and the poisonous discharge therefrom passing backward into the throat, reaches the stomach, thus producing catarrh of the stomach. Medical authorities prescribed for me for three years for catarrh of stomach without cure: but to-day I am the happiest of men after using only one box of Stuart's Dyspepsia Tablets. I cannot find appropriate words to express my good feeling. I have found flesh, appetite and sound rest from their use."

Stuart's Dyspepsia Tablets is the safest preparation as well as the simplest and most convenient remedy for any form of indigestion, catarrh of stomach, biliousness, sour stomach, heartburn and bloating after meals.

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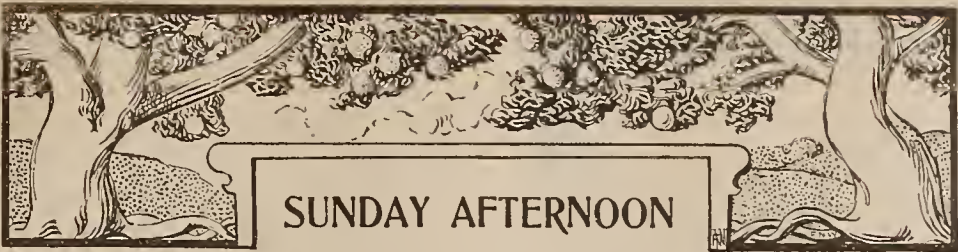
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SUNDAY AFTERNOON

SUNRISE NEVER FAILED US YET

Upon the sadness of the sea  
The sunset broods regretfully;  
From the far, lonely spaces, slow  
Withdraws the wistful afterglow.

So out of life the splendor dies,  
So darken all the happy skies;  
So gathers twilight, cold and stern,  
But overhead the planets burn;

And up the east another day  
Shall chase the bitter dark away;  
What though our eyes with tears be wet!  
The sunrise never failed us yet.

The blush of dawn may yet restore  
Our light and hope and joy once more;  
Sad soul, take comfort, nor forget  
That sunrise never failed us yet!

—Celia Thaxter.

HEALTHFULNESS IN THE HOUSE

THE first consideration of the home should be in reference to its healthfulness. It is only by a due attention to particulars that the household is maintained at its best, and this includes not only the indoor arrangements, but the immediate outdoor surroundings. That "order is Heaven's first law" has passed into a proverb, and order embraces fitness, arrangements, simplicity and, above all, neatness. It should begin with the cellar and end nowhere. Too often is it the case that certain unfrequented rooms, especially those below grounds and under roof, are quite overlooked on the occasion of periodical house-cleanings, and yet the air of the living-rooms is made foul by emanations of decayed vegetables from below, and the accumulated dust of the lumber garret is a standing invitation to the pestiferous microbe.

In populous cities the drain-pipes and sewers are a prolific source of disease, to repel which even the most efficient safeguards are incomplete, but much is gained to health by keeping the run clear of obstruction, with an occasional flushing, with the addition of lime, soda or salt and hot water.

On moving or clearing-out day we look upon the dusty pile of worn-out and utterly useless rubbish brought to light, and wonder where it all came from. Not one thing of all is worth saving or carrying away, and the whole obtruding collection of good-for-nothings should have been long before discarded from the family storehouse.

We are apt to be too indifferent in respect to the environments of our country homes, which are not accessible to any general system of sewerage. All waste water should be carried a considerable distance from the house, and never suffered to stagnate in the open air.

If the water supply is from a well it should be located beyond the possible pregnation of objectionable deposits. We have in mind the corruption of well-water—in one instance by a cow-yard, and in another by a petroleum refinery, located at a distance of a hundred feet or more. The trouble may be years in manifesting itself, but it is sure to come in time. Open wells in frequent use are preferable to closed ones, inasmuch as they have the advantage of continuous fresh-air purification.

The needful appurtenances of a country home are a series of outbuildings, including a stable, cow-shed, hen-house, etc. While these should be conveniently accessible from the dwelling, they should never be suffered to encroach upon its sanitary requirements.

Good health is the foremost consideration, and nothing should be allowed to stand in the way of it. In this regard a great responsibility rests upon parents, which the exercise of prudence and sound common sense will wisely meet and gratefully fulfill.—New York Ledger.

FAME

In Cambridge, where Byron was a student, a tradition still lingers that even as a boy his one thought was the world before which he perpetually pined. Whether he ate, or drank, or strolled across the quadrangle, he was, in his own opinion, an actor upon a stage, with the whole world for spectators. "In his last days," says a recent biographer, "he talked of death at the head of the Greek troops as the most fitting end to his career,

in the eyes of the public." Another man of genius who achieved a brilliant fame dreaded notoriety as much as Byron craved it. There can be no doubt, said the biographers of Mr. Du Maurier, that his sudden and great success made the last year of his life unhappy. He said to a friend in London. "I feel as if thousands of peering, curious eyes were following me wherever I go. I cannot shut them out." Nothing is more significant in the lives of great workers than the different ways in which they regard the world for which they work. Carlyle, with an inward necessity upon him to preach, held his great audience as probable enemies, and was always uneasily conscious and bitterly scornful of it. Robert Louis Stevenson, on the contrary, was so in love with his work that he carried it to the public with the eagerness of a child who calls to his comrades to rejoice with him in a treasure he has found. The great missionary, John Coleridge Patteson, we are told, "was so absorbed in his work for God that it did not occur to him how that work had made him dear to all England." Our influence upon our generation largely depends upon the attitude we take toward that hydra-headed, ruthless giant that we call the world. If we live, like Patteson, for work and for God, we shall not care for its notice or be uneasy because of its contempt; but if we live only to win its favor, we may be trampled with countless others under its unheeding feet.—The Youth's Companion.

PRESERVE THE CHILDREN'S TEETH

The rude and thoughtless manner in which physicians and parents sacrifice the teeth of children is to be deprecated. Parents should be warned strongly against the practice of having the teeth of children removed, either the first or second set, unless under the advice of a competent dentist. When the first teeth are extracted early, and for a considerably period before the second teeth take their places, the jaw gradually contracts, and thus diminishes the space allotted to the second teeth. The contraction which thus takes place cannot be again recovered, and a certain fullness and rotundity of the face are lost. The first teeth, though very frail and destined for a temporary service, may be preserved until they are displaced by the second teeth, by having the decayed points cleansed and filled properly. Of the necessity of preservation of the first teeth there can be no doubt. The comfort of the child in after life and the good appearance of the face alike demand that these teeth be preserved until they are pushed out by the second teeth.

GIFTS AND GIVERS OF GIFTS

Kindness is not so much shown in the cost of presents, but in the way of presenting them. There is, as a German proverb says, much honor in a glass of wine—which means that a gentle nature will show much more in the way sought to oblige than in the magnitude of the gift, which may depend on the means of the giver and not on his heartfelt wish to be kind. A man may be able to give an eagle as a charity, but may throw the gold coin so as to avoid the touch of the needy person, and, by humiliating him, diminish the value of the gift. It is given only to a few people to accompany the gift with a warm, sympathetic look or smile or a kind word, which will do more than the gift itself to console or comfort.—The Occident.

RECENT PUBLICATIONS

CIRCULARS RECEIVED

Geo. B. Matoon, Matoon, Wis. Pamphlet describing 10,000 acres of choice farmland in Langlade and Shawano counties, Wisconsin.

W. Atlee Burpee & Co., Philadelphia, Pa. Circular of Burpee's novelties in sweet-peas for 1899.

The Monitor Co., Moodus, Conn. Illustrated circular of improved incubators and brooders. Edward W. Walker Carriage Co., Goshen, Ind. Illustrated catalogues of high-class carriages and harness.

Geo. L. Tabor, Glen St. Mary Nurseries, Glen St. Mary, Florida. Handsomely illustrated catalogue of citrus and deciduous fruits specially adapted to the different localities of the coast region of the South Atlantic and Gulf states.

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## CHRISTMAS-TIDE

EVERY year I read in paper and magazine the advice to begin preparing for Christmas early in the year, and I wonder if the writers follow their own advice. Every year I think I will do this, but December finds me as usual with much yet to be done. Every month brings its calls for necessities, and the family purse is never overfull. Then as Christmas-time draws near so does tax-paying time and the need of winter clothing for the family. If ever I wish for a full pocketbook it is at Christmas-time. Of course, if one has plenty of time, there are many dainty trifles that deft fingers may fashion, but when one pair of hands must cook and wash, make and mend, there is not much spare time left. However, let the circumstances be as discouraging as they may, we can all do something to add to the cheer of the sweet Christmas-time. It is not the value but the love that prompts a gift that makes it precious to its possessor. Some one says, "Never let your gift-giving become a burden." It never will if love prompts it, for no sacrifice for love's sweet sake can ever be a burden. If you live in the country and wish to send a present to a near-by city friend, go into the woods and get some roots of ferns, a basketful of ground-ivy and of holly, if it grows near you, or some sprays of bitter-sweet, of strawberry-bush with their scarlet berries, or of any plants that can be used for Christmas decoration. If you are a flower lover, and have saved seed of your choice annuals, make up some neat assorted packets and send them to some friend who will prize them; these you can send a long distance by mail. If you have house-plants, and have neglected to start slips for this purpose, take some off and pot them now, or if you can spare a blooming plant, so much the better. A few cents will get bulbs of the Chinese lily, which is grown in a bowl of water and blooms in a few weeks after starting, the amaryllis or of oxalis, which will be prized, I am sure, by any flower lover.

If you can make nice crullers or fruit-cake, and your neighbor cannot or does not like to cook, send her some of your make. A bagful of nuts, a box of pop-corn, some of your sweet, yellow butter or fresh, new-laid eggs or a jar of thick cream are also very acceptable gifts to your near-by city friends.

If you live in the city and wish to send something to your country friend, let me whisper that she likes pretty china, dainty linen for her table and any pretty trifle which you have more time to make than she.

Then there are books for every one. What a comfort they are! There are cheap books and expensive books; books for the old, the

lover. Although the victories of our army on land and sea were comparatively bloodless, yet disease brought by exposure has taken the lives of thousands. These brave ones who drilled and marched and bore the discomforts and burdens of camp life through the long summer as truly are heroes as those who fell in battle. If your home is one left desolate, and the light seems to have all gone out of your life, remember there is no better balm for a sorrowing heart than trying to bring cheers to another. Seek out some poor and lonely or sorrowing ones, and try to bring a little brightness into their lives. Be more gentle, more tender and loving to the dear ones still with you, and after a time the peace of which the angels sang at the first Christmas-time will come into your heart.

MAIDA MCL.

### ALL SORTS AND KINDS OF SCRAP-BOOKS

A lady who had several years' numbers of "Woman's Home Companion" made several nice scrap-books during the past summer, with an eye to Christmas. Being an old lady, with a hand that will not allow her to do fancy-work, her only pastime is making scrap-books, and her friends save all their worn-out ledgers and other books for her, besides giving her quantities of old papers.



FIG. 1

The books that she has made from this excellent magazine were formally patent-office reports, bound in black cloth. Two thirds of the leaves were removed, great care being taken so as not to loosen those that remained. The paste she uses is made from flour, water and a very little sugar. These are cooked, and stirred until a smooth, thick paste is the result. It is used cold.

All the leaves that have been removed are saved, and when a day's pasting is over three or four of these leaves are placed between each set of damp leaves, and these are replaced by dry ones every few hours until the book is perfectly dry. It is placed under a heavy weight while drying.

The result of this care is that the leaves are perfectly smooth. Where the title was upon the back of the book she paints with black oil-paint, and when dry puts the title she wishes in gold letters, using gold paint and a fine sable brush. The children's page in these papers generally has a picture that nearly covers it, and these were put into an old account-book that had two thirds of its leaves removed. Some colored plates were put here and there, and the outside was covered with gray linen and an ornamental title in gold letters and pansies painted in oil-colors. These books are lovely, and the children who receive them will be delighted. She has a great many copies of FARM AND FIRESIDE, "Woman's Home Companion" and other home papers that have been given her, and I will mention several more of the scrap-books that she has made:

For a friend who spends her leisure time crocheting there is a book that is quite an original idea. The book was originally a weather report, and is about six by ten inches, and two thirds of an inch thick. In this fully half of the leaves were removed, and six leaves of buff holland, such as shades for windows are made from, inserted. Upon the paper leaves are pasted all sorts and kinds of crochet patterns, together with the directions, and the holland leaves are left blank, for the owner to fasten crocheted samples upon. The book is covered with gray linen, with a band of fine crocheted antique insertion diagonally across the front,

and the legend, "With Thread and Hook, Not Hook and Line," in white outline-stitch. The insertion was old, but it did as well as new for this place.

There is a book upon fancy-work that was once a primary geography, but no one would recognize it in a new dress of pretty blue chambray, with an outline design of spool of thread, thimble and scissors, and the words "For Busy Fingers." A mental arithmetic that had not been soiled inside furnished the foundation for an exquisite book of poems, it being just wide enough for one column. This was daintily covered with white linen with a few forget-me-nots worked in blue silk, and the word "Poems" in fancy outlining in pink.

There is a general-housekeeping book divided into departments and covered with a piece of an old electric-gray gossamer cape. This has a design of a tiny tea-kettle, broiler, coffee-pot and skillet done in outline with a fine brush and white paint.

These are all the books that I can now recall to mind, and when one considers how little she had to do with, and how large the results, the thought comes that no matter how limited our resources may be, if we make the best of what we have we can do more than we think at first.

MAY LONARD.

### DAINTY GIFTS FASHIONED FROM CRAPE-PAPER

Among the dainty fancy articles which are displayed in such gay quantities at the Christmas season in the large stores I find

nations are very beautiful. If one is not familiar with the making of paper flowers, which is simple enough, however, I believe there are small pamphlets costing a few cents which give the necessary information.

EMMA LOUISE HAUCK ROWE.

### CHRISTMAS-TIMES

Christmas follows so closely upon the footsteps of Thanksgiving-time that we have hardly time to think of another exquisite

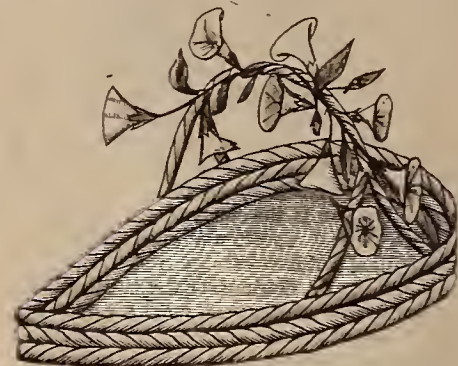


FIG. 4

bill of fare—provided we have been busied with that kind of Thanksgiving fare. But the Christmas dinner will doubtless be a success, and I am very sure that the FARM AND FIRESIDE family stands in no immediate need of cookery suggestions from me. But presents we are all of us thinking about, and undoubtedly wondering what we shall give, though there is never a doubt as to where and to whom.

A year slips by so fast, and it brings changes that are drear in retrospect as well as changes that at least should have made us thrice glad. And to think even this fast-coming Christmas-tide is to bring sorrow and heartache to some one that is somewhere. For there passes never a day but that some home is made desolate—even that day that commemorates the birth of Christ, our Savior of the world!

So long ago as the year 150 A. D., we are told, the day that to-day we celebrate as the birthday of Christ was recognized among Christians without a doubt as to its being the natal day of the Savior. This is acknowledged the best foundation that we have for the authenticity of December 25th as the birthday of Him whose memory and whose birth we seek in so many ways to commemorate. We are told that it is quite as certain that Jesus of Nazareth was born upon this date as that Augustus, the emperor under whom he was born, was born in the sixty-third year before him, or that Tiberius, the emperor under whom he died, came into the world forty-two years, one month and nine days before him. And this much for the history of the one and only pure and undefiled man who ever came into the world, and remained so to the day of his death.

We are every year reminded to make practical presents, and it is doubtless a very wise reminder. Yet this same practical method has been sometimes made too practical perhaps. In making these practical gifts let us remember to make them entirely suited to the use of the one to whom presented, and not so generally useful that any one or all of the family will be tempted to make use of them. If father or mother is to have a handsome, but above all, a comfortable chair, be sure that after it is purchased and presented it shall not be looked upon as too good for every-day use, and be sure that the one for whom intended shall have the undisputed use of it, even by action if not by word.

Choose books for several of your presents if the purse will permit. And it surely will if it warrants purchases of almost any nature whatever. Handsomely bound books from standard authors are to be had for sums much less than a dollar, and a book is a gift so graceful that to any one it may be offered in the best of good taste.

A Christmas tree for the little folks comes never amiss, and it gives so much of pleasure at so little trouble and cost. A year ago a dozen of little folks, the children of a little "clique" circle of intimate friends, were so delighted with such a surprise that had been planned for them that every one felt repaid for every exertion made in their behalf. An elegant Christmas supper was a pleasant feature of the day to all, and the happiness and good cheer of the entire occasion to all who were there paid well the host and hostess who had bidden their guests and invited the parents to bring their presents for their children and place them on the tree. Four little maids that evening were presented with cradles for their dollies; nor were they toy affairs. Two ladies who were quite experts with bracket-saws fashioned the pieces after a home-de-



FIG. 2

young, the middle-aged and the little children. Only be sure that they are good books, and you will give something in which the pleasure is lasting.

Since last Christmas so much has happened. The war, in which our nation so nobly went to the assistance of a poor, oppressed neighbor, has brought sorrow into many happy homes. In many households there is a vacant chair and hearts are mourning the loss of husband, son, brother or

signed pattern, and one of them, an artist and a painter of beautiful pictures, painted them all a delicate blue, and decorated them in an artistic style. Children of an older growth than those for whom they were intended wished themselves little folks again, for the cradles looked so handsome, and were so substantial withal, that the mothers of the babes were as intoxicated with the delights of the hour as were the babes themselves, with their dollies and cradles. At some one's home among the so-called "clique" of dear and intimate friends there is to be a repetition of the pleasures and festivities of the Christmas of '96.

But how the sad things do creep in! Mid the preparations and joys of those hours there comes word, "She can live but a few days longer, I fear, my dear boy!" And a physician tells the young husband of a year that only for a little while can he keep his young wife. After hours of mind-agony, with her consent he gives his to the operation that may prolong the life perhaps a little longer, and the day before Christmas, under the beneficent influence of the chloroform that deadens to pain for the hour, the knife is applied, and breathlessly her physicians and all who are dearest to the sufferer await the awakening and the results. At midnight, just as the bells were ringing proclaiming the approach of the day when all would be calling and proclaiming it the day of holidays—Christmas—one of the anxious physicians came to the door of the husband, who waited with fear and anxiety, and told him that one short year more his wife would be spared to him—but just one was all he could promise. He went in to see her, and through all her agony she smiled at him from her couch, and kissing him, said, "God is very good to us, darling. I may stay with you for a twelvemonth more."

And yet we who have a better prospect for life and so many things to make us happy and content are so often found complaining and forgetting that "God is very good to us."

It is well for us all that these heart-breaking things in life are revealed to us sometimes. Every heart must throb in unison with the hearts of those who mourn so with the hopelessness of such despair as must have been that of the heart of him who could not hope to keep his wife more than one short year more at the farthest. "Angels e'en must turn and weep."

This bit of life history has not been meant to sadden or darken the coming Christmas-time. Yet it makes our hearts the more tender toward all the world where suffering and grief plays a more prominent part than does joy. It makes us, too, the more appreciative of the kinder fate that at present rests with us, and we turn to Christmas-making with more of a determination to make others happy about us.

NEDELLA HAMPTON.

### CHRISTMAS SOUTH

DEAR READERS OF FARM AND FIRESIDE:—This is Thanksgiving day, and I have just finished reading the Thanksgiving number of FARM AND FIRESIDE. I love to read of



FIG. 5

old-fashioned New England Thanksgivings, but we of this part of Virginia usually have our "big dinners" on Christmas. I am a farmer's daughter, and help my mother keep house.

It is an old saying that there is nothing new under the sun, and these suggestions may be familiar to most every one.

Farmers' wives so often complain that their city and town relatives and friends have the advantage over them. They have so much more time to make all kinds of dainty and pretty articles for Christmas gifts. They can watch the prices, and often secure a bargain in china and glass or silver, whereas if the country woman goes to town to spend her very little extra money she has to pay full price for everything.

Well, to be sure; but why spend the little money which might as well go for papers and magazines to cheer the farmers' long winter evenings? When you are pickling or canning or preserving just add an extra can or two for your town friends. Most farmers' wives and daughters are fond of plants. Just raise a few from bulbs or slips, and on Christmas day send growing plants to some who are down on your list for Christmas gifts. I know of some folks who are very willing to take their present sometime beforehand in the shape of eggs for the Christmas cake. And right here I wish to ask some questions about fruit-cake. How do you make it? I have heard of people keeping it for a year. I should like to know something about making and keeping it.

I know if I lived in town my country relatives could not please me better than by bringing me some pretty prints of golden butter. In making gifts it is not so much what we should like to give as what we have to give.

At Christmas-time the servants, especially the darkies in this part of the country, are sure to take a holiday. The young people of the family are full of fun and frolic, and so busy going to parties and entertaining company, that they have very little time to help



FIG. 3

mother. The colored people are delighted with their nicely roasted 'possum, and persimmons dried and sugared. The last are really fine. Take a stone jar, put in a layer of the fruit, sprinkle with sugar, add another layer of fruit, and so on till the jar is filled. Cover it, and set in a dry place. The fruit will dry, and taste like dried raisins.

But the colored cook and farm-hands are sure to expect some of the Christmas food prepared by the white folks, and during the week before the holidays are quite willing to help with the work. Of course, the Christmas dinner has to be a great affair, but the remainder of the meals served during the holidays need not be so elaborate, and another will show her good sense if, beforehand, she prepares food that will keep some length of time. For spiced beef take a round weighing fifteen pounds, and place it on a large platter. Mix well two dessert-spoonfuls of pepper, two of allspice, two of cloves, two of saltpeter and twelve of salt with two tablespoonfuls of molasses. Rub this compound into both sides of the round, and repeat the process every morning for three weeks, turning the round over on the platter daily. When it is ready for use make a good gravy of beef and put it, with the spiced round, into the oven, where it must stew slowly for several hours. Cover it closely while stewing, and add water to the gravy if necessary. Do not cut until cold, and then in very thin slices.

For pressed chicken boil the chicken till the bones can be easily removed; chop the chicken fine or put it through a sausage-grinder—the latter is better—mix a few bread-crumbs with the chicken, put it back in the liquor, and let boil a few minutes. Season with salt, pepper and sage. Be careful not to get it too moist. Place it in a vessel, and place a weight on.

Do you know how to make beaten biscuit—such biscuit as the old-time southern cooks used to make? Sift two quarts of flour, add two teaspoonfuls of salt, two very scant, in fact, hardly more than half a teaspoonful of baking-powder to a quart of flour. This last is a modern improvement, for in olden times baking-powders were unknown. To two quarts of flour take two level tablespoonfuls

of lard; work it in well, and mix with water; mix stiff, and work it into shape; then beat with a rolling-pin or an ax for half an hour, or longer if you like. When the dough blisters it is beaten enough. It has to be beaten hard, and a little colored boy is the best hand that I have found for beating biscuit. Break the dough into small parts and work into tiny biscuit. Have an even, rather hot fire, and I am sure you will like beaten biscuit. These biscuit, with slices of the spiced beef and pressed chicken, with pickles and jelly, will make a supper or luncheon good enough for anybody, and all the things mentioned can be kept on hand during the week. And if you like to add chocolate or coffee, fresh and hot, and nicely sliced cake, you have the privilege. I meant to send some more recipes, but this letter is already too long.

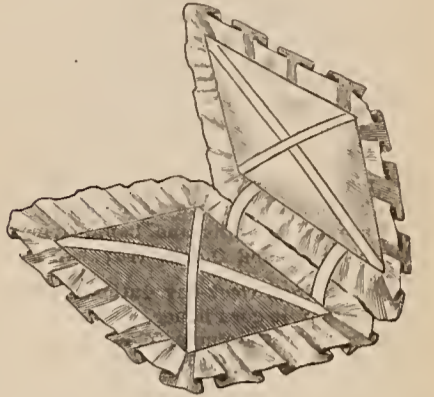
THEODORA.

### TIPS FROM SANTA CLAUS

A COMB AND BRUSH RECEIVER FOR MOTHER.—Get a yard of huckaback linen toweling; cut two pieces each twelve inches long and six inches wide, also a strip nine inches long and three and one half inches wide, and a six-inch square. In all these pieces put one narrow hem. Over them in crimson, blue or yellow silk embroider or outline any easy design you wish, the symbolic circle being the simplest and most decorative. Use a five-cent piece for your design, and embroider in this wise: First a single circle, two interlacing circles, a single circle, then three interlacing circles; let double circles come opposite single circles. Vary your design. Let two circles be placed

the padded lining on the inside of the strip, and finish with a heavy white or blue silk cord. Fill with pretty stationery, fold shut, and tie around with a band and a huge bow of blue satin ribbon.

FOR THE SISTER THAT HAS A SWEET-HEART.—Take the finest, daintiest, sheerest linen or lawn that you can find. Cut a tiny square, hemstitch it, put on an insertion of delicate Valenciennes lace, a strip of lawn



the same width as the insertion, then a ruffle of old-fashioned footing; or if you know how to make tatting, put on a border of dainty tatting circles. A dash of perfume finishes an exquisitely beautiful gift.

FOR THE BOOK-LOVER IN THE FAMILY.—Select a yard of fine white huckaback toweling, as the linen has a pleasanter touch to the hand than cloth. If you prefer, satin or China silk, if padded, makes lovely covers. Cut two pieces of linen ten inches long and four inches wide, and one piece fourteen inches long and ten inches wide. Over the long piece trace this motto in pretty lettering:

"Bid me discourse,  
I will enchant thine ear."

In one of the lower corners outline the lamp of wisdom. Sew the smaller pieces to the larger, and go entirely around the edge with some pretty dainty embroidery-stitch. If you prefer silk you will need to pad it lightly with cotton and line it throughout with silkoline. Embroider or paint in gilt or silver the lettering, and you will have in either case a book-cover that will gratify the taste of the most luxurious book-worm.

FOR FATHER.—Don't pay any attention to those who laugh, but go ahead and make him a pair of good, warm slippers. There isn't anything that will yield him half the comfort that a pair of warm slippers will. You can buy the soles from any dealer, and you had better knit or crochet the uppers from gray or black yarn, and finish with a roll of rabbit fur. Let part of your Christmas gift extend through the year in always having them warm and cozy when he comes in of an evening. He may not say much when you give them to him, but if the slippers are not standing before the fire in the evening you will most certainly hear him say, "Daughter, do you know where my slippers are?"

M. M. M.

### CHRISTMAS FRUIT-CAKE

Two pounds of brown sugar; four pounds of raisins, stoned; two pounds of currants, well washed; one half pound of citron; one grated rind of lemon; one grated rind of orange; two nutmegs; one half pound of butter; one tablespoonful of allspice; one cupful of strong coffee; one gill of brandy or wine; ten cupfuls of flour, well sifted, and one pint of Orleans molasses.

MIXTURE.—Cream sugar and butter first, then add molasses, spices, flour, coffee and brandy, and one tablespoonful of soda mixed in a little hot water, and mix well. Then bake a small piece to see if the dough is just right; if your dough stands up then it is right; if flat then add more flour. When dough is just right then add all fruit. This makes a very large cake, of which half can be used when about six weeks old. Cover with a cloth saturated with either brandy or wine.

BELLE KING.

### A LUNCHEON DISH

Whipped cream and prunes make a pretty luncheon dish, and it is easy to prepare. Stew half a pound of best prunes, taking out seeds, drain off all water, mash the prunes with a spoon, and then add whipped cream which has been sweetened and flavored with vanilla. Now have ready small custard-cups, and fill with the mixture. Put on ice until wanted, then add one spoonful of the whipped cream. Place on each cup, if one wants, either pink or violet, or a colored mixture can be used.

B. K.

(Continued on page 14)

## HER SHOPPING-BAG

'Tis made of lustrous velveteen,  
Drawn tight with silken strings,  
But I am sure you couldn't guess  
What very curious things

It was to hold from day to day,  
So I will name a few:  
You'll find their range from pins and lace  
Quite to an oyster stew:

A leg of lamb, a slice of ham,  
Bonbons and patty-pans,  
A charlotte russe, a cafe mousse,  
Lamp-wicks and paper fans,

Love-letters, cards and hateful bills,  
Quail, sausage and grape-fruit  
(I do declare it is enough  
To strike a brave man mute).

And many books and locks and hooks,  
With small things two or three,  
Like scent-bags, pills and banjo-strings,  
Cough-drops and Oolong tea;

And when from week-day duties free  
On Sunday it goes hence,  
Enshrining in its ample folds  
Prayer-book and Peter pence.

On birthdays and on holidays  
The things it's made to hold  
Would turn a miser pale with greed  
And make a pirate bold.

'Tis made of lustrous velveteen,  
Drawn tight with silken strings—  
This magic bag, this shopping-bag,  
That holds such curious things.

—Anna M. Fowler, in New York Sun.

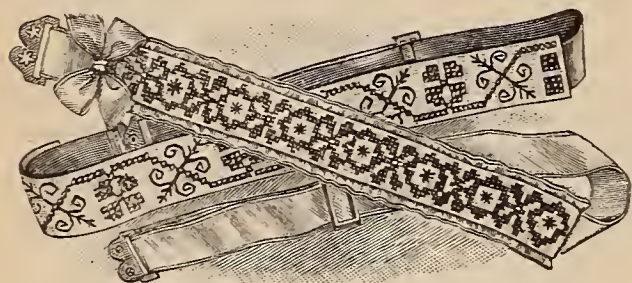
## WAR OF THE ROSES

There are still churches that cling to their conservatism and do not approve of raising money for religious purposes by suppers or fairs or shows of any kind, but by giving as the Lord has prospered.

One church holding such views has for several years past so far compromised as to allow the young women of their foreign missionary society once a year to give a supper, charging twenty-five cents a ticket, and they must really give a supper worth it.

The annual supper is held early in November. It is a festive occasion, and the girls try each year to make the entertainment pleasing. For weeks before the supper this year they were planning ways in which to carry out their "War of the Roses," as they called the entertainment.

When the evening came the chapel was



beautifully decorated with red and white, the red on the north side of the chapel, while the white prevailed on the south side. Great quantities of paper roses, bunting and banners of every possible device carried out the color scheme. Wax candles in red and in white were used and in many unexpected ways. There were pretty decorations carrying always the same idea, but the gowns were the prettiest of all. The Lancasters had gowns of figured red calico, costing six cents a yard. The dresses were made in shirt-waist fashion, full sleeves, and the skirt plainly hemmed, but about the waist-line puffy panniers of red cambric were fastened, and a sash of the red with large bow at the back. The girls in white had their dresses made in the same fashion, save now and then one on the reception committee wore some fine white dress left over from the summer season.

The question of the war really was whether the red or white sold more supper-tickets. The girls had been engaging their friends long before to join their side. In families where there were daughters on both sides, part would sit at the red table and part at the white, to keep peace in the "war," as one good grandmother said.

The president of the girls' society wore a white waist with a red and white striped rose pinned on, a real York and Lancaster rose; she wore this bicolored rose showing the union of the parties after the war was over, for all the money was to be put in one fund for mission purposes.

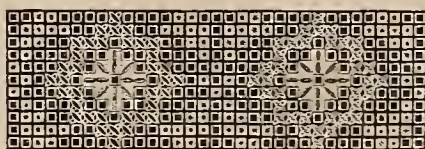
The girls cooked the hot dishes on the cook-stove in the church kitchen (for they often gave free suppers at the church, and so had conveniences). They had fine creamed potatoes, croquettes served with peas, and delicious coffee, besides the cold meats, rolls, cake and pickles which are ordinarily served.

There was a good sum of money raised. While it made a good deal of merriment, and was artistic enough to appeal to the esthetic taste, it was more than that. Everybody who knew of it, both old and young, read more history that fall, especially about the thirty years included in the "War of the Roses," than some of them—the older ones—had done in thirty years before. At the public library the assistants wondered what had made the sudden call for histories of England, and one day said that the various literary clubs must have changed their plans of study for the winter. All this reading was because the girls were ingenious in interesting the people in their supper. An effective name for a supper as well as for a story is, after all, half the battle.

MARY JOSLYN SMITH.

## SUSPENDERS IN CROSS-STITCHES

A pretty gift for lover or brother is a handsome pair of embroidered suspenders. Cross-stitch designs in colored silks upon heavy white corded silk are very suitable. If you have a factory in your own place you can have them mounted at a very small expense, but to avoid too much work get a handsome white pair of the kind you know your men-folks wear, and put on the em-



broidered piece and finish it neatly at the edges. This is much the fastest way, as the other part of the work must be done by experts.

K.

## CHILDREN'S SHOES AND STOCKINGS

The little tots have a style as well as their mamas. To have the boys dressed in proper style they must wear brown shoes and stockings, and the shoes must lace. No matter what the little knickerbocker pants and square top-coat be in color the little man's shoes must be brown.

The little miss, on the other hand, must have them all black, and her shoes must button. The very latest in little girls' wear from two to six is a black satin skirt and pretty fancy white guimpes. The closest French bonnets have the lead, yet there are beautiful creations of corded silk, fur and lace. Some bonnets have as many as five little feathers on them. All bonnets have broad ties tucked and lace trimmed. The double-breasted reefers are in fancy colors, and they are very much trimmed, and how sweet the little tots all look each in their own style!

B. K.

## NEW STYLE OF EMBROIDERY FOR LOVERS OF SOMETHING SUBSTANTIAL IN NEEDLEWORK

This new embroidery, which will at once commend itself to those in search of something substantial, is done in leather on leather, and various things for the home can be made in leisure hours, such as chair-cushions, borders for heavy table-covers and portieres. The groundwork as a rule is of some dark, rich, colored skin, and worked with lighter shades.

A handsome banging I saw was of maroon leather on which were worked upright rows of fleur de lis in yellow leather, and the stems and leaves green. The effect was very pretty.



Another pretty thing was a large chair made to match a library-set in green leather and quartered oak. The head of a tawny lion was worked in the leather. The work is not difficult, but it requires practice and a steady hand. The pattern is first sketched in on its leather foundation, then gone over with a keen-bladed instrument made for the work, and outlined by tiny slits and holes. It is into these slits that the working leather cut into slips is drawn in various widths; this forms the work. The leather can be purchased in almost as many colors as embroidery-silks. The needles used are coarse bodkins, blunt points.

BEILE KING.



Most people appreciate a good thing at a fair price, but some few will only have the things that cost the most money.

The Ivory is the favorite soap of most people. Some few want the high-priced toilet soaps and think they must be better because they cost more. No soap is more carefully made, or is made of better materials, than Ivory Soap.

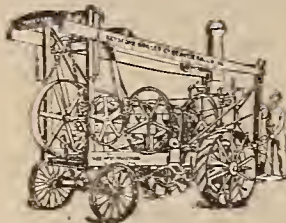
WORD OF WARNING.—There are many white soaps, each represented to be "just as good as the 'Ivory';" they ARE NOT, but like all counterfeits, lack the peculiar and remarkable qualities of the genuine. Ask for "Ivory" Soap and insist upon getting it.

Copyright, 1893, by The Procter & Gamble Co., Cincinnati.

## THE MAHONIA

I should like to recommend to farmers' wives to get a plant of Mahonia, our only American evergreen shrub, and plant it where they can get cuttings from it for winter decorations. The Mahonia will not endure the winter's sun, but if planted in a northeast angle of the house will prove quite hardy and be as green at Christmas as in

June. The shrub is low-growing and spreading, rapidly increasing in size after it gets well established. The blossoms in May are balls of gold and are exceedingly attractive. The young growth is a rich carmine. If you will plant near it a few roots of Christmas rose or a black hellebore you can have a bouquet for your table at Christmas or any time through the winter. E. P. POWELL.



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## Christmas Gifts for Sensible People.

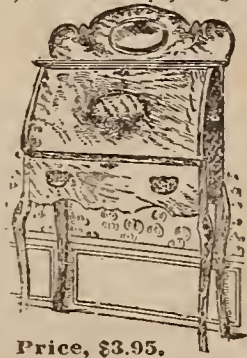


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## THE LOST WILL

By Will Allen Dromgoole

## CHAPTER VIII.

## FOUND

HERE was a ringing in Mrs. O'Bryan's ears when she awoke to consciousness, and she could still hear the roar of water in the underground current as it dashed through the unexplored abyss. She opened her eyes, gasped, and then her healthy brain at once took in the situation. In an instant she understood that she was a prisoner among the ruins of the spring-house, which had suffered another "cave-in." There was a curious feeling in her head, and the knot on her forehead felt, she declared, "as big as a chase-box, sure."

The roof in falling had followed the course of the first accident, so that little Mrs. Nora, prowler that she was, had not fallen under the main ruin, but lay back to one side, while the old timbers had fallen upon and into each other in such a way that her entire body had escaped, with the exception of both feet, which were securely imprisoned by a great cedar beam that rested upon them. The beams and sills, although uprooted from their foundations, had fallen in such a way as to catch the main roof and hold it back from the small body of the prowler among the ruins. A breath, a whiff of wind might send the thing upon her; but for the present, at all events, she was unharmed. She opened her eyes to a gloom too dense to penetrate for a moment; but after a moment's waiting, in which the vision adjusted itself to the darkness, little Mrs. O'Bryan gave one startled little scream and tried to spring up. Then she fell back with a baffled sigh. The big timber held her down. But right before her, so near she could almost touch it, she beheld a long hollow beam that had been wrenched in half protruding from a heap of gray shingles. And in the hollow, as calm as a bird on its nest, white and innocent and insignificant-looking, lay a long folded sheet of paper. Straight across the top of it, in letters that looked as big as waffles, the prisoner under the rubbish read:

"Last Will and Testament of Jonathan Womack."

She did not cry, as some women might have done, and she did not call for help. She merely lay quite still for awhile, and chuckled in her happy little Irish way, and blessed every saint in the calendar, and talked about the "ould cat's claws" being clipped; and then she tried again to lift herself up. She had no idea that she was really fast under the big beam, but she was. The obstacle that held her feet was outside the main ruin, and upon it rested hundreds of old shingles and sills and ruined timbers that it might mean death to so much as touch. She could not withdraw her feet, but she soon found that she could draw herself almost into a sitting posture, and then she found that by edging carefully down to the side of the wreck and reaching her left arm above her head she could reach the extreme edge of the long-lost document.

Three times she drew herself up and touched the paper, but each time failed to grasp it. Only the tips of her fingers had touched the coveted treasure. She fell back and rested a moment, then prepared for another trial, for she had no thought of giving up until she should have secured it; not, she told herself, "if she had to spend the winter in the spring-house."

So she crept as far down to the edge as her cramped position would allow, sat up as well as she could, and extended her hand; the next moment the precious will was in her possession. Then she did a most naturally womanish thing; she dropped back among the gray, worm-eaten, rat-infested, bat-sheltering, weather-beaten, haunted old timbers, and with the will hugged to her bosom became frightened out of her wits and cried like a baby.

Then she stopped crying for awhile to laugh and hug her precious find closer to her heart, and then made a new effort to free herself from the trap that held her poor feet. But it was no use; she lay there until she was stiff and numb and her limbs began to ache and cramp frightfully. But at every effort to free herself the tottering ruin threatened to come down upon her head.

So she gave it up at last, and lay there waiting, idly wondering how long, if she should be buried, suffocated under the ruin, it would be before anybody would find her. Then she wondered if her body would be greatly mangled and if she would turn black in the face. Then when she had cried a little more she thought of Mike, unsuspecting, at work over in the cotton-field among the hands; and again her courage came back to her.

"He'll nose me out," she told herself, tap-

ping her shoulder with the recovered will. "Mike'll nose me out, so Oi'll not be worrying. That is to say if the ould cat don't come home ahead of him."

Thinking of Mrs. Womack again incited her to an effort at freedom. She sat up and began to look around her.

"Oi'll get the bearings of me, at least," said she, "and if Oi must die Oi'll die knowing the lay o' the land, anyhow."

She had fallen in the center of a small clearing in the ruin, over which the greater part of the timbers had drifted to the sunken side of the building. The crumbling old boards were held in place overhead and about her by two immense cross-beams that had lodged, and in lodging had lodged the smaller timbers also, and held them in a temporary support until, perchance, some stray gust of wind should again set the debris tumbling.

But just behind her, where she had drawn herself up, her back rested lightly against the weather-beaten wall. In this several planks had been dislodged, and through the crevice Nora could see the green grass outside, and could feel the good fresh wind blowing against her neck. If the roof didn't quite

she fell to wondering where Mike was anyhow. Something had happened; he would have hunted her out long ago had not something prevented. And she fell to imagining a hundred things that might have kept him away from the house. And while she thought and planned and wondered the sound of the water took a soothing turn; the banshee breathed upon her eyelids, the numbness in her feet ceased to annoy her, and a moment more officious little Irish Nora was fast asleep.

She did not know that a cloud had risen, and that when the spring-house fell there was a great crash; not that a pair of wide white eyes had been watching the ruin when she went in, nor that the same startled eyes had peered through a crevice and had seen her lying there among the old timbers. She did not know that the owner of the eyes had saddled a mule in wild haste and gone galloping across the field to the farm-house over the hill, where farmer O'Bryan sat by the well-sweep under the wild-cherry tree, nodding over his pipe and wondering why the dinner-bell did not ring. The prisoner in the spring-house knew nothing of all this; her last conscious thought was that it was growing dark, night was coming, and she could do nothing but wait for relief.

When she awoke familiar eyes were peeping at her through the gaping cracks of the timbers; there was a rapping and grating and drawing of rusted old nails in the weather-boarding over her head.

Then the spirit of mischief awakened, too, and the next time the rapping sounded little

"Now, Mike," she said, "pull!"

She was covered with dirt; there wasn't a particle of the pretty Irish face that did not wear a comical coloring of brown dust, splinter-webs and smut. After one glimpse Mike broke into laughter. But little Mrs. Nora had lost all patience long ago.

"Pull me out, you spalpeen!" said she, "and lave off your laughing. There, easy now! Be sure you don't tear the will, Mike."

Mike dropped his hold upon the round, fat arms, and stared.

"The what, Nora, did you say?"

"The will, Michael O'Bryan; the last will and testament of Jonathan Womack. What did you think I was climbing the ould bats' roosting-pole for if not for the will? Pull me out, man!"

"Nora," said Mike, "let's see the will."

"Pull me out!" said Nora.

"The will first," said Mike.

"Pull me out!" repeated Nora, in a tone Mike knew meant no yielding.

"Niver a pull will Oi give till you show me the will," said Mike.

Nora sighed in a resigned way, and said:

"Run home, Mikey, and fetch me a pillow. And fetch me a bite of supper, if you please. And Oi say, Mike, hadn't you as well have a mite of winter wood laid in for me, through that hole in the wall; for on the terms you've laid down here I spend the winter, Mike."

"Faith, thin," said Mike, "give hold, and out with you. Oi don't belave you've found any will to begin with, sure now."

"No, and maybe Oi've been dreaming up there in the 'bluebirds' cradle' the day long, Michael O'Bryan. But look at that!" And triumphant Nora flattered the big writing full in Mike's wondering eyes.

"Pull me out now, Mikey; pull me out," said she; "it's cramping Oi am with sthaying in this hole all the day. Why, Mike—"

"Yis," said Mike, when they stood outside together, free of the haunted old house forever. "It's the cloud makes it look darkish, Nora; it's but two of the clock, and it's but forty minutes since the house caved. You've been wandering in your slape, Nora."

It was a very happy pair that tramped home across the cotton-fields together, arm in arm, like lovers who are true. Mike was very proud of his wife, and Nora was very proud of finding the will. But she reminded Mike that he "was strutting a dale too much," considering it was she who had found the document entirely.

That night, when they sat down to supper, Mike said:

"Nora, you're a great girl. Why didn't you let your ould man into the secret? Sure Oi can kape a still tongue in the head of me."

"Sure, and I knew it, Mike," said Nora. "But the ould negro Ben said Oi was to tell none, and Oi thought it best myself not to drag too many into the thing, in case there might be trouble. And the ould man over there, Ben again, said I was to hunt for it myself, because the ladder would only support the light load, and he couldn't thrust the children of him to climb it, and himself was too heavy. And so Oi did, and that's all."

Mike grinned, and shook his head.

"Own up fair, Nora," said he, "own it up fair; you wanted to be the one to clip the ould cat's claws."

But Nora's face wore a serious look.

"Faith, Mike," said she, "Oi'm being sorry for her, sure now. It'll be the great come-down for the widow Womack. Oi'm thinking, Mike, The farm gone, and the power, the big cotton-fields, and the b'y she meant to make work for her. The farm, the b'y, the ould house and the banshee all gone at one blow, Mike. It's bad now, sure."

The recovered will was properly placed in the hands of lawyer Brewer, and in due time was promptly probated, the guardian designated in the document was appointed, and the estate promptly wound up.

Wesley found himself under the guardianship of Michael O'Bryan, and was put at school with Tim. The farm found a good lessee in a person who retained old Ben and his family, and Mrs. Womack took up her abode in her town house, where she soon found solace in a second husband, as Nora had predicted. The new husband proceeded very promptly and systematically to spend her property as suited his own extravagant notions.

Friday afternoons Mrs. Nora's surrey might be seen driving into town for "her b'ys," who, she declared, "naded a holiday, since they were both studying the life of thim away."

When the boys were through school Wesley left Tim to go into the study of his profession, while he himself went back to the farm. Tim still held to the idea that an Irishman was not intended to be a farmer, and to Wesley's insinuation that his own father had been rather successful in that line Timothy always replied:

"But it's mother runs that farm, Wes. And for the life of me I can't help thinking what a lawyer she would have made, with the wit and the wisdom and the nimble tongue of her. Why, her tongue is as clearly cut for a lawyer as your best clothes are cut in the pigeonwing."

Twenty-one found Wesley back on his own farm, with the old servants still in the cabins. That is, Sam's family occupied the cabins; Uncle Ben and Aunt Jane lived in a new house in the yard, and Aunt Jane was Wes-



"JUST BEYOND HER REACH  
LAY A FOLDED PIECE  
OF PAPER"

"I HAVE COME BACK TO BEG A HOME"

crush her under she could make herself heard through this crevice whenever Mrs. Womack should come home, or Wesley should, as she hoped, wander in the direction of the spring. The cabins were too far off for the inmates to hear her call, unless some chance good luck might bring some of the hands to the farm-house at noon. Or Mike himself might come over hunting for her at noon. Mike? She had forgotten the instructions given him—not to come home until he should hear the bell ringing. And remembering these things, little Mrs. Nora, baffled at last, gave a despairing cry.

"Saints protect us," said she, "and the poor b'y will be after waiting for the bell!"

Then the hours drifted on, she fancied, into the far afternoon, and still Mrs. Nora sat there; it began to feel chilly, and she knew the dew was falling. Mrs. Womack would be soon coming home, and at the least, she fancied, would sue her for trespassing on her possessions. But it was growing too late for even Mrs. Womack to venture out to the haunted spring before morning, and Mrs. O'Bryan grew really alarmed listening to the hissing of the black water in the pool somewhere under the same black ruin with herself. The banshee became a reality, and was only waiting for the darkness in order to drop her down into the bottomless spring.

Then her mood changed, and she broke into laughter—loud, long, healthy laughter—and told herself she was "an ould fool for meddling in her neighbor's affairs; and that Mike O'Bryan was another for ever letting a mite of a second wife boss over him." And then

Mrs. O'Bryan replied, in her best Irish brogue:

"Come in; come; don't sthoph to ring the bell."

"Nora?" cried Mike. "Nora O'Bryan, and are you dead in there?"

"Jist," said Nora. "Suffered a hundred deaths, Michael O'Bryan, awaiting all day for the like of you to remember that you had a wife, sure. And now, Mike, will you please to pull me out of the hole Oi'm into? Don't pull at that; wait, wait, man; it's shaking loose a ship in a gale! Get the ax and pull off half a dozen of the ould boards at the back of me after you'll be lifting the log off the fate of me, Mike. The ould roof is ready to tumble upon me this minute, Mike; run for the ax, mau, and get me out before it's dark, quite."

Mike, who was really in great danger of pulling the ruin down upon the poor prisoner, dropped everything and ran for the ax. A moment later he was industriously pulling off the boards immediately behind her. At every touch the house threatened to come down entirely. So fearful was he of bringing it upon Nora that when he pulled off a few planks, making an opening large enough to admit a small body lying flat, he called to her:

"Faith, Nora," said he, "and can you squeeze through?"

"Sure," said she, "if you'll but give me a pull."

She crept down upon the ground, lying flat as possible, and worming her shoulders around so that Mike could reach her through the opening he had made.

ley's cook. The younger children had drifted out to other homes.

The old spring-house ruin had been torn away, and in its place stood a new building of stout gray limestone that defied alike bat and hanshee. Cocks of new butter stood along the broad stone shelves, and pans of sweet new milk from the cows that stood knee-deep in the southern clover or cooled themselves in the placid waters of Stone river the long summer noons. Peace, plenty and sweet content came to the young farmer, and the life that had run among the shadows grew rosy.

One afternoon, when the sun lay warm upon the southern hills and the cotton was in bloom again, a woman, sad-eyed and weary, alighted at the farm gate. Wesley was dozing in his hammock when some one spoke his name; he sprang up to meet—his stepmother. His eyes filled with tears as he noted the changes time and suffering had wrought in the once harsh face.

"Mother!" he cried, all the old bad treatment forgotten in a moment.

"My son," said the weary woman, "I have come back to beg—a home—a place to die in."

He took her in his arms and kissed her. "It is yours to live in," said he, "to live and grow strong and happy in. Go in: the keys are hanging in the old place where they used to hang, and your room's just the same as you left it."

From that moment she made one of his household always; and as the years passed, and she remained the same gentle, kind and grateful woman that had wandered back to beg a home when she had lost both property and husband, Wesley wondered much upon the parting admonition of his father's:

"Make for yourself enough to insure a manly independence." And thinking of these things he understood how power in the possession of a small nature is a lash with which he whips the helpless into a degrading servitude. And he resolved that since out of his own experience had come this unhappy knowledge that one of the aims of his life should be to always speak a warning to other boys who might cross paths with him on the life journey. Not to make money-getting the end and object of existence, but to impress upon them the necessity of feeling independent if they would know what real manhood meant. "A living," he would say, "is absolutely necessary, not only to insure a man the respect of his neighbors, but his own self-respect as well." Then he would add, "There is no man living, blind, deaf, dumb or otherwise afflicted, to whom the Lord has given a sane mind, who cannot, if he will, earn a living. Moreover, the whole world knows this, so if you fail to make the living the world knows it is simply because you will not."

To which Mrs. Nora (who sometimes overheard his sermonizing) would add:

"And faith, if you fail to earn it, like as not you'll be stalling of it by and by, since bad goes to worse as aisy as an ould sow to the mud-hole, sure."

THE END

### THE QUEEN OF THE YEAR

When snus are low and nights are long  
And winds bring wild alarms,  
Through the darkness comes the Queen of the Year  
In all her peerless charms—  
December, fair and holly-crowned,  
With the Christ-child in her arms.

The maiden months are a stately train,  
Velled in the spotless snow,  
Or decked with the bloom of Paradise  
What time the roses blow.  
Or wreathed with the vine and the yellow wheat  
When the noons of harvest glow.

But oh, the joy of the rolling year,  
The queen with peerless charms,  
Is she who comes through the waning light  
To keep the world from harnus—  
December, fair and holly-crowned,  
With the Christ-child in her arms.  
—Edna Dean Proctor, in The School Journal.

### THE DEACON'S PATENT CHURN

By Will S. Gidley



ONE of the closest figurers and, in many respects, most original characters in the thickly settled and prosperous township of Buckwheat Ridge was Deacon Peterson.

The deacon owned a good farm, and held mortgages on several others; and it is said of him (by those who were envious of his growing fortunes) that he never let a dollar go out of his hands without first coating it with muckage or pine-tar and firmly attaching a reliable string to it, so that he could bring it back whenever he wished, and more along with it.

This may not have been strictly true, but the fact remains that in farming and in money-lending Peterson was unusually successful. It was only when he ventured outside of these legitimate and lucrative fields of human endeavor that he met with disappointment and disaster; and it is the history of one of these unfortunate divagations that we shall here record.

In addition to being a first-class mathematician, when there were any profits to be figured up, Peterson was something of a carpenter and machinist, and one thing that

worried him greatly was the amount of energy or motive power that was going to waste on his place.

"Why, plague take it!" he exclaimed one summer day, when the flies were unusually active, "it jest makes me miserable to see them fourteen cows of mine switchin' their tails right along stiddy from mornin' till night, an' all that power goin' clean to waste, every plumb bit of it. Why, I believe if I had them cows all fastened up in a row, an' their tails hitched to the right kind of a machine, I could light the hull town with electricity, or pump water enough to run a big factory, an' soon git rich as old Croesus or one of the Vanderbilts."

"Well, Silas, why don't you do it?" inquired Mrs. Peterson, encouragingly.

"Why don't I do it?" snorted Peterson, the question seeming to have about the same effect on him as the proverbial red rag on a bull. "Purty question to ask! Why don't I do it? Well, I'll tell you why I don't. In the first place I ain't got the right sort of machine, an' in the next place the machine wouldn't work anyhow in the winter after the flies air called in, unless I had a man standin' alongside of each cow, ticklin' her with a feather or snhtin' to keep her switchin' her tail, an' I reckon that 'd take off considerable of the profits, so it ain't goin' to pay me to start a factory run by cow-power jest yet, Hanner—not till I git the scheme a little better developed."

"I thought one spell maybe I might try heating the cow-power house in the winter, an' fool the flies into the idea that it was summer, an' keep them buzzin' an' bitin' right along; but I dunno whether the fly constitution would stand such a strain as that. I've always noticed that flies don't seem to hustle around an' take much interest in what's goin' on in the winter, even when they're in a warm room an' there's lots of things they could jab their bills into jest as well as not. The most of inventors don't stop to think of all these little drawbacks, but I do. I never crawl into a hole unless I'm toler'bly certain I kin back out ag'in when I take a notion to. So, as I said before, I don't propose to waste any time or money on the cow-tail-power idea until I git the kinks in it all straightened out an' know exactly what I'm doin'; and in the meantime I'm goin' to work an' finish up my patent wagon-wheel-power churn."

"For the land's sake, Silas, what kind of a churn is that?"

"A purty good kind, I call it. You see, I take one of the hind wheels of an ordinary democrat wagon an' fix the inside of the hub next to the wagon-box so a leather or rubber band will run on it, an' this band turns another wheel that I expect to have rigged up above it, projectin' over the side of the wagon, an' this last wheel turns a lot of cranks an' levers an' does the churnin' as slick as grease while you're drivin' along the road on business or fer pleasure, as the case may be."

"And where'll the churn be all this time?" inquired Mrs. Peterson, innocently.

"Why, settin' in the hind end of the wagon, of course. Mighty sensible question to ask! Don't imagine them air cog-wheels an' levers an' other arrangements would do any churnin' unless you had the churn along, do you?"

"I don't know but what you could fix it in some way."

"I s'pose not," sniffed Peterson, sarcastically. "You probably thought I'd drive around until that patent churnin'-machine was wound up, same as a clock, an' then I'd come back home an' hitch it onto the churn an' set it to work. That would naturally be a woman's idea of it; but this machine don't work that way. The patent wagon-wheel-power churn is operated with the churn standin' in the back end of the wagon—or at least it will be when I get it completed; an' it is goin' to be one of the most useful inventions of the age. I can see that already. Every farmer in the country will want one the minute they see how it operates; an' as soon as I git the invention so it works all right I'll start a churn-factory an' turn 'em out by the hundreds an' thousands, an' sell 'em anywhere from ten to twenty-five or mebbe fifty dollars apiece. Hain't made up my mind yet jest how much I will charge for 'em, but I'm goin' to be sure an' git the figgers high enough to pay me fer my time an' trouble; an' in less'n ten years, unless I'm very much mistaken, I'll have purty close onto a million dollars laid up from the profits of that patent churn of mine."

"Better not count your chickens before they're batched, Silas; you can most generally tell more about it when they come out of the shell," dryly observed Mrs. Peterson, glancing up from her sewing.

"That's right, that's right, Hanner! Do yer best to discourage a man an' keep him from gittin' along in the world! Throw cold water on every money-makin' project an' aspiration of yer hard-workin' an' long-sufferin' husband! If that's the kind of a woman you air I'll keep my plans to myself hereafter. You kin snifle an' coax around all you want to, but I won't tell you a word about 'em—not a solitary word!" And with this dire threat Deacon Peterson got up and stamped angrily out of the house.

The deacon was as good as his word, so far

as that patent wagon-wheel-power churn was concerned. He kept quietly at work on the invention which he fondly believed was destined to revolutionize the hutter industry of the country and make his everlasting fortune, saying nothing to Mrs. Peterson as to how the work was progressing until he had the churn completed and ready to put on exhibition.

And then he took her by surprise by driving around to the horse-block in front of the house one Sunday morning at the usual time for starting to church, with that butter-industry revolutionizer occupying the rear end of the wagon, and the cog-wheels, bands and pulleys all adjusted, ready to start up at a moment's notice simply by pulling a lever.

"And what is all this, may I ask?" frigidly demanded Mrs. Peterson, gazing with decided disapproval at the unique display of machinery in the back end of the wagon.

"That!" exclaimed Peterson, waving his hand with an air of proud proprietorship in the direction of the array of levers, cranks, etc. "Oh, that is my patent churn! Git right into the wagon, Hanner; it ain't goin' to bite you."

"Why, Silas Peterson! Do you mean to say you're going to drive to church with that thing on the wagon?"

"Cert'nly I am. You needn't look so horrified over it. I hain't goin' to start it to workin' until after church is out an' we're all ready to come home; an' then I reckon it won't be the same as if we was workin' ourselves. I can't see any harm in that machine doin' the churnin' as we're ridin' peaceably an' quietly along on our way home from church; an' besides, it will be a grand advertisement for the churn; lots of folks will see it on Sunday that probably wouldn't git to see it on any other day."

After some persuasion Mrs. Peterson was finally induced to accept a seat in the wagon, and they started off, though she kept declaring over and over again, in spite of the deacon's admonition "to shet up or some one'll hear you," that "just as sure as they were born and sittin' in that wagon somethin' dreadful was bound to happen, some awful accident or catastrophe, as a sort of judgment on them, before they got back—no one could fly into the face of Providence that way without being punished for it."

And sure enough, after church was out and Peterson had driven up to the horse-block in front of the sacred edifice, with his patent wagon-wheel-power churn adjusted ready to begin operations and show the crowd what it could do, and had stepped out and was about to assist his better half into the conveyance for the purpose of proceeding homeward, a thoughtless female in a bottle-green shirt-waist suddenly opened a bright crimson parasol with old gold trimmings within three feet of the nigh horse, and in considerably less time than it requires to ejaculate "Jack Robinson" the startled team were galloping madly away down the dusty pike, with the wagon swaying and bumping along behind them.

A dozen rods from the starting-point the wagon struck a "thank-yemarm" (as the mounds made for resting-places for teams and turning water out of the road are called), and the cover promptly flew off the churn and a column of cream shot up into the air like a Yellowstone geyser in full action.

Then one of the hind wheels of the wagon bumped into a small-sized boulder, and the churn broke loose from its moorings, bounded up in the air, turned a complete somersault, spilling out the rest of the cream impartially over the wagon and contents, and then came down with a crash on the whiffletree behind the runaway team, causing them to run faster than ever; while the churn-dasher, now released from confinement, pounded and thumped and revolved and thrashed about until the air was filled with splinters of wood, cog-wheels, crank-shafts, pinions, pieces of leather, sample hunks of democrat wagon, and a whirling, chaotic mass of other debris not sufficiently identified for purposes of enumeration.

A few seconds later, as the wagon struck a second boulder and rolled over into the ditch a complete wreck, while the galloping steeds parted company with it and disappeared from sight around a bend in the road, Mrs. Peterson turned to her husband (who was standing with open mouth, gazing spellbound on the scene of destruction before him), and triumphantly remarked:

"Well, Silas, I guess now you'll wish you had listened to me!"

And all the reply that Silas made was, "Humph!" which the reader may interpret to suit himself.

But perhaps it would be well to here record, for the benefit of would-be inventors, that Peterson's patent wagon-wheel-power churn, with all the inalienable rights, royalty, accrued or prospective, and other appurtenances and privileges pertaining thereto, is now for sale at bargain-counter figures. No bona-fide cash offer refused, reasonable or otherwise. Please call early to avoid the rush.

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## OUR ASIATIC MARKETS

We have no moral right to condemn the highly skilled labor, which we have systematically evolved, to inaction and starvation, or to remit it back to the rude tasks of the farm; we are in honor bound to give it, so far as this lies within the power of a far-seeing foreign policy, the economical market which it has challenged and deserved by proving its ability to undersell its foreign rivals. That which may be fairly described as morally obligatory and as economically wise will also be presently acknowledged to be a fiscal necessity. The time is close at hand when we shall cease to be able to meet a large part of the requirements of the federal government by means of customs duties levied upon imports from foreign lands; we shall cease to draw adequate revenue from this source because American manufacturers are rapidly acquiring the power of answering almost all American demands not only for the comforts, but also for the luxuries of highly civilized life. As we shall, consequently, be compelled to make good the deficit in our public income by imposing excise duties upon our native products, it will behoove us to assure the largest possible outflow for the surplus of those products, not only by retaining our hold upon existing markets, but by creating new ones.

In no quarter of the earth can we more reasonably expect an immensely increased demand for our commodities than in the Celestial Empire. Even now the volume of our trade with China represents more than one seventh of the whole foreign commerce of that country. Our imports from the Middle Kingdom have, indeed, grown but slowly, but our exports thither have been augmented by one hundred and twenty-six per cent in ten years, and are over fifty per cent greater than the exports thither from Germany. The value of the cotton cloths sold by us to China in 1897 amounted to nearly \$7,500,000, or nearly one half the entire valuation of the cotton cloths sent ashore by the United States. The export of kerosene-oil from this country to the Middle Kingdom has more than trebled in value during the past ten years; in 1897 it amounted to \$4,500,000. The exports of our wheat flour to China reached a value in 1897 of \$3,400,000, and our exports of chemicals, dyes, etc., were appraised at an additional million. When the spacious and densely peopled area of China is covered, as it will be at no distant date, with a vast network of railways, there will be an enormous demand for steel rails, locomotives and rolling-stock, all of which our manufacturers will be able to supply more cheaply than any of their European competitors. It follows that our trade with the Middle Kingdom being already considerable and offering the promise of almost limitless expansion, we have, next to England, most to lose by the partition of China among protectionist powers, and most to gain by insisting upon freedom of access to her markets. The magnitude of our interest, present and future, in the fate of China would, taken by itself, suffice to warrant a departure from our past policy of aloofness, and would justify us in adopting a program of co-operation with such other maritime nations as are deeply concerned in upholding China's territorial integrity and a complete liberty of traffic with her inhabitants. The nations, between which and ourselves there may be said to exist a solidarity of interests as regards the Middle Kingdom, are obviously Great Britain and Japan, and it is probable that sooner or later Germany will be included in the list. Not one of the four powers named, with the possible exception of Great Britain, is strong enough single-handed to thwart the ambitious designs of Russia and France, each of which can assail China by land, the one from Siberia and the other from Tonquin. But what even England might shrink from attempting alone three or four of the powers named might easily accomplish by co-operation, and we may, apparently, take for granted that a community of interests will, in the end, compel them to combine. An alliance of that sort, instead of being an entangling one, such as Washington cautioned us to avoid, would be strongly commended to us by the very same considerations of commercial policy as led Washington himself to approve of the Jay treaty. It is, in truth, for no other purpose but to keep our existing treaties with China operative and fruitful that we may be ultimately forced to unite with Great Britain and Japan, and, possibly, with the Great Empire, in order to interpose a check to Russian encroachment and to save the Middle Kingdom from total disintegration.—Collier's Weekly.

## THE PHILOSOPHY OF FORGETFULNESS

Forgetfulness is passive, not active. The nerve-cells of the brain send out long feelers ending in tiny tufts by which they come into contact with other nerve-cells. Thinking is an active process. When one tries to think some of these little feelers begin to reach out and touch the filaments of other feelers. In the act of remembering there is an active process by which the filaments feel about until they touch the thing that is wanted. It is the same as when you run your fingers up and down the key-board of the piano until you strike the familiar chord which brings the tune back.

Forgetfulness is simply the lack of ability

to do this. It may be caused by different things; for instance, by the use of whisky. All irritating poisons have the effect of shortening the feelers. They exercise a paralyzing influence. Fatigue also causes an accumulation of poisons in the brain, so that when a man is very tired he cannot remember well—the filaments of the nerve-cells become paralyzed by the poison and cannot reach out to find the pictures or impressions necessary to memory. This is the philosophy of forgetfulness. That man can remember best whose blood is the cleanest and purest, who lives upon the best diet, who burns up the poisons in his system by fresh air and exercise, who takes natural and adequate sleep, so that the pores of his body are cleaned out, the cobwebs of his brain brushed down, and the dust and other debris swept away.—Good Health.

## CHICKADEES

When it is quite cold the chickadees come. Their arrival always excites the whole household, for they are dear old friends. Fresh nuts are cracked, more baskets put out, and, figuratively speaking, the fatted calf is killed; not that we regard the chickadees as returned prodigals, but because we are so delighted to see again these little joys on wings. Chickadee makes no complaint, no matter how many birds come to share his nuts; he sits in the shrubs or trees, a bit between his claws, and sings his song over and over, as merrily as if he invited all bird-land to come and be happy with him.

Last spring one pair of the six who have been with us so long built on the place. I sat for a long time watching the female come back and forth to pull out the fine wool beneath the long hair of the skin rugs in the front hall. She came in with a businesslike little womanly flutter, while he frisked about outside, evidently nervous but determined to protect her from all harm, singing all the while, or rather whistling, his sweet little mating song. His voice sweetens in the spring, while she loses hers almost altogether. He is pompous and important at this time; she is fussy and affected, reminding you of those women who are subject to fainting-fits and are perpetually on the hunt for their smelling-salts. He feeds her at this season with choice hits, and one would almost think her a newly fledged birdling to see her open her mouth, flutter her pretty wings, and talk baby talk. A week ago she was as independent and self-reliant as if she were the leader of a female birds'-rights movement.—Lillie Barr, in Lippincott's.

## HABITS OF THE FUR-SEAL

The fur-seal is a land animal, of perverted tastes, who, living at sea, has had his paws changed into flippers very like the long black kid-gloves of a woman. His heart, liver and kidneys are exactly the same as those of a sheep, and although just like fat mutton to look at, is rank and distasteful from his habit of eating fish. The whole package is put up in a parcel of thick white fat to keep the body warm, while from the skin grows a heavy crop of beautiful brown fur, protected with large, flat, oil-bearing hairs, making a glossy surface which slides through the water without friction. Perfectly fearless, overflowing with fun, a perfect little athlete, marvelously strong, the fur-seal is the most delightful of all wild creatures. But although they live at sea, the seals, being heavily clothed in fat, skin, fur and hair, find the temperate latitudes much too warm for comfort during the summer months. Since they cannot shed their garments like ourselves they migrate to a subarctic climate, gathering in immense multitudes where there are fisheries to support them. Their ration is fifty pounds of cod every day, which for a creature the size of a sheep is considerable.

When the little pups appear their mothers go a-fishing to feed them, and likewise teach them to swim. The pups howl with fright when first thrown into the water. Now, outside the seal city, with its regular streets and larceny, assemble the young bachelors not yet grown enough for love or war. Here man steps in, driving the poor bachelors away inland to be clubbed for their precious fur.

## THE WORLD'S GREAT CITIES

A table of the population of the world's great cities published in the "Chicago Tribune" estimates the present population of New York to be 3,350,000, second only to that of London, with 4,231,431. Boston, with its contact suburbs, which fairly belong to it, as New York, Philadelphia and Chicago are measured, is put down at 1,000,000 population. The population of Paris is 2,447,957, and Chicago claims to be second to this, with Berlin the third and Vienna the fourth, closely followed by Philadelphia, which takes the fifth rank, with an estimated population of 1,250,000. Then there are Tokio, St. Petersburg and Pekin, the latter supposed to be of the size of Boston. The "Tribune" gives the opinion that the great increase of the large American cities comes from the foreigners who emigrate to this country crowding in them rather than repatriating to rural neighborhoods. No considerable nation of the world has so small a capital as Washington in point of population—230,392—and many of the smaller nations exceed it in the numbers their capitals contain.

## Which Half is the Better Half

The housewife's duties are harder than men realize. Cleaning alone is a constant tax on her strength, a never-ended task. More than half the work of cleaning she can have done for her, if she will, and the expense will be next to nothing.

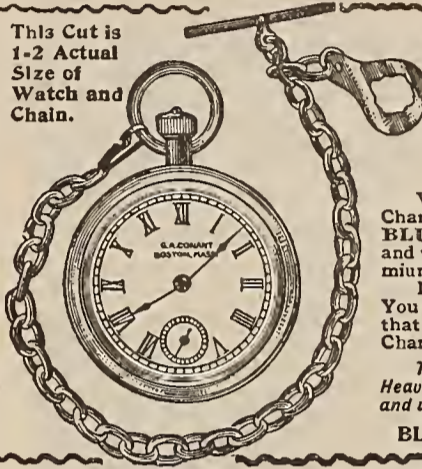


## GOLD DUST Washing Powder.

Does the better half of cleaning; does it better than any other way known; does it easily, quickly and cheaply. Largest package—greatest economy.

THE N. K. FAIRBANK COMPANY, Chicago. St. Louis. New York. Boston. Philadelphia.

This Cut is 1-2 Actual Size of Watch and Chain.



## Watch and Chain FOR ONE DAY'S WORK.

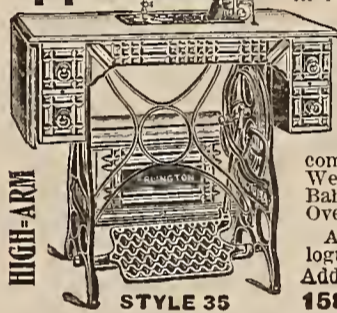
We send this Nickel-Plated Watch, also a Chain and Charm to Boys and Girls for selling 1½ dozen packages of BLUINE at 10c. each. Send your full address by return mail and we will forward the Blaine, postpaid, and a large Premium List.

No money required. We send the Blaine at our own risk. You go among your neighbors and sell it. Send us the money that you get for it and we send you the Watch, Chain and Charm, prepaid.

This is an American Watch, Nickel-Plated Case, Open Face, Heavy Bevelled Crystal. It is Guaranteed to keep Accurate Time, and with proper care should last Ten Years.

BLUINE CO., 392 CONCORD JUNCTION, MASS.

\$14.50



STYLE 35

## 30 Days Free Trial

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\$45 Arlington Sewing Machine, high-arm \$14.50 \$35 " " " " \$12.50

These machines have all the latest improvements light running, noiseless; adapted for light heavy work, self threading shuttle, self-setting needle, automatic bobbin winder and complete set of best attachments free. 10 Years written warranty. We are headquarters and have all makes and kinds in stock from Baby Machines at 95 cents to the best high arm.

Over 50 different styles including machines as low as \$8.00

A first class high-arm machine at \$9.25. Large illustrated catalogue and testimonials free. Write today for special freight offer.

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WHERE THE HEAT GOES.

There are hundreds of sleeping rooms about the country now cold and cheerless, that might be made otherwise by the use of the

## ROCHESTER RADIATOR

with its 120 cross tubes. One stove or furnace does the work of two, and you thus

## SAVE ½ YOUR FUEL

if you don't understand it, send for free booklet. Where we have no active agent we will sell at wholesale price to introduce.

Rochester Radiator Co., No. 3 Furnace St. Rochester, N. Y.



WHERE IT SHOULD GO.

## CONSUMPTION CURE FREE

Catarrh, Bronchitis, Asthma We possess the great secret of a positive cure for diseases of the Lungs and Respiratory Organs. It is the most valuable original discovery made in Medicine in the last twenty years. To prove these facts we will for the next sixty days send our new Home Treatment entirely free to every sufferer from Consumption, Catarrh, Bronchitis or Asthma. Mr. Frank W. Dewey, Pawano, Mich., Rev. David R. Butrick, Motley, Minn., Mrs. Margaret Taylor, North Henderson, Ills., and many others write gratefully of their cures by this new discovery. If you are in need of such help we advise you to take advantage of this great offer. Send us your name, age, post-office address and nearest express office, with all particulars of your disease, and we will at once send you Large Book and free Home Treatment as stated. Address THE ALPHA MEDICAL INSTITUTE, 588 Sycamore Street, CINCINNATI, OHIO.



## HIGH-GRADE INCUBATORS

DES MOINES INCUBATOR CO. Box 61, Des Moines, Iowa.

WE CAN SUIT YOU IN PRICE AND WE GUARANTEE TO PLEASE YOU IN QUALITY. What more could we do? Our catalogue tells all, and is devoted largely to practical matters pertaining to poultry raising. Has 148 pages; mailed to any address for 6c. No wild and woolly statements, toy outfits, nor prize package lots to offer. Fair treatment, prompt service and full value are what we try to give our customers.

## LARKIN SOAPS

Our offer fully explained in Farm and Fireside October 1st, November 1st and 15th.

AND PREMIUMS.—FACTORY TO FAMILY The Larkin Idea fully explained in beautiful free booklet. Free sample soap if mention this publication.

The Larkin Soap Mfg. Co., Larkin St., Buffalo, N. Y.

## SILK REMNANTS FOR CRAZY WORK.

A big package of beautiful Silk Remnants, from 120 to 150 pieces, all carefully trimmed, prepared from a large accumulation of silks especially adapted for all kinds of fancy work. We give more than double any other offer, and the remnants are all large sizes, in most beautiful colors and designs. With each assortment is four skeins of the very best embroidery silk, assorted colors. Send 25 cents in silver or stamps to Paris Silk Agency, Box 3045, N. Y. City, N. Y.



## Quilt Patterns

We want every quilter to have our book of 400 Designs, containing the prettiest, queerest, scarcest, most grotesque patterns, from old log cabin to stars and puzzle designs. All sent, postpaid, for 10 cents. 7th revised edition; beautiful, unique.

LADIES' ART CO., 230 Pine St., B 88, St. Louis, Mo.



## USE IT FREE

30 days in your own home before paying one cent in advance; shipped anywhere to anyone, for 30 days' test trial. We risk you. \$60 White Star Machine, . . . \$25.00 \$50 Pearl Machine . . . 18.00 Other Machines, \$9, \$12.50, 16.00 Full set of attachments free; buy from factory and save \$10 to \$40; WE PAY FREIGHT thousands in use; catalog, showing 20 other styles, free. Each machine guaranteed 10 years.

Consolidated Wholesale Supply Co., Address (in full) Dept. 91, 215 S. Clinton St., Chicago, Ill.

LADIES to do plain sewing at home, \$1.50 per day, four months' work guaranteed; send stamped addressed envelope for full particulars. R. W. Hutton & Co., Dept. 52, Philadelphia, Pa.

WRITERS WANTED to do copying at home, Law College, Lima, O.

VIRGINIA FARMS FOR SALE—Good land, good neighbors, schools and churches convenient. Mild, healthy climate, free from extremes of both heat and cold. Low prices and easy terms. Write for free catalogue. R. B. CHAFFIN & CO. (Inc.), RICHMOND, VIRGINIA.



## A TIMELY POINTER

"I'll give you a pointer, Mollie,"  
Said Tommie the other day.  
"If you want certain things at Christmas  
You'd better try my way."

"It's easy and very simple,  
And always works, for I  
Have tried it many and many a time  
In Christmases gone by."

"Write Santa Claus a letter,  
In your very best hand,  
And give him a list of the things you want,  
Don't matter at all how grand."

"And then, when the letter is written,  
Just take it to dear old dad,  
And ask if he thinks the spelling  
And writing is awful bad."

"I once wrote a note to Santa,  
And sent it off right away,  
And not a thing that I asked for  
Was sent on Christmas day."

"But the letter I showed to daddy,  
To see if 'twas written right,  
Brought everything I wanted  
The following Christmas night."

"I don't know just how he knows it,  
But pa knows a thing or two  
'Bout how old Santa should be addressed  
By kids like me and you."

—Harper's Bazar.

## THE TURKEY OF LIFE

Now it don't seem right ter sing a song ter  
make yer all feel blue,  
But, speakin' er turkey 'n' Thanksgiving-  
time, did it ever occur ter you  
That fer years 'n' years, as well as to-day,  
Dame Fortune has whetted her knife  
Ter carve 'n' distribut' in unequal chunks th'  
hot, steamin' turkey of life?

Some folks er horn with proverbial spoons,  
git all th' white meat from th' breast—  
When ther' jackets er stuffed with things  
that er good they don't keer a snap  
fer the rest;

Some folks git th' wings of joy 'n' content, 'n'  
soar with 'em all er ther life,  
'N' some er them nibble 'n' pick all ther days  
at ther bare bone ur trial 'n' strife.

Dame Fortune is fickle 'n' heartless 'n' cold,  
she don't do th' joh ter suit us,  
Fer th' way she has dealt out th' turkey of  
life has caused lots er trouble 'n' fuss;  
Some are in luck if ther Thanksgiving hird is  
heef-stew 'n' bread on ther side,  
'N' lots of us now are content with a pull at  
the "wish-bone" all brittle 'n' dried.  
—Wilbur Duntley, in Boston Herald.

## A CHINESE ACCOUNT OF THE UNITED STATES

WE are told that the countries of the  
foreign devils are grand and rich,  
but that cannot be true, else what  
do they all come here for? It is  
here that they grow rich. But you  
cannot civilize them; they are beyond redemp-  
tion. They will live weeks and months with-  
out touching a mouthful of rice, but they eat  
the flesh of bullocks and sheep in enormous  
quantities. This is why they smell so bad;  
they smell like sheep themselves. Every  
day they take a bath to rid themselves of  
their disagreeable odors, but they do not suc-  
ceed. Nor do they eat their meat cooked in  
small pieces. It is carried into the room in  
large chunks, often half raw, and then they  
cut and slash and tear it apart. They eat  
with knives and prongs; it makes a civilized  
being perfectly nervous. One fancies himself  
in the presence of sword-swallowers. The  
opium poison which they have brought us  
they do not use themselves. But they take  
enormous quantities of weskiehu and shang-  
ping-chu (whisky and champagne). The latter  
is very good. They know what is good, the  
rascals! It is because they eat and drink so  
much that they never rest. A sensible, civ-  
ilized person does nothing without due con-  
sideration; but the barbarians hurry with  
everything. Their anger, however, is only a  
fire of straw; if you wait long enough they  
get tired of being angry. I worked for two  
of them. The one we used to call the "Crazy  
Flea," because he was always jumping about;  
the other we named the "Wooden Gun," be-  
cause he never went off, though he was al-  
ways at full cock.

They certainly do not know how to amuse  
themselves. You never see them enjoy them-  
selves by sitting quietly on their ancestor's  
graves. They jump around and klee halls  
as if they were paid to do it. Again, you  
will find them making long tramps into the  
country; but that is probably a religious duty,  
for when they tramp they wave sticks in the

air, nobody knows why. They have no sense  
of dignity, for they may be found walking  
with women. They even sit down at the  
same table with women, and the latter are  
served first. Yet the women are to be pitied,  
too. On festive occasions they are compelled  
to appear almost naked before the men.

## TOOK HIM AT HIS WORD

Jones is something of a wit, and sometimes  
he tries to work off wit instead of cash.  
He called on Gale, the coal-dealer, a short  
time ago, and ordered a load of coal sent to  
his house. After he had explained what kind  
he wanted he walked out, remarking, as he  
went, "Say, Gale, just slate that, will you?"  
meaning that he wanted it charged.

A few days afterward he came into the coal-  
dealer's office swearing mad, and said to Mr.  
Gale, "That coal you sent me was full of  
rocks."

"Oh, no," answered Mr. Gale, "we only  
slated it as you directed."

## AROUSED HIS SYMPATHY

"What's the matter with Freddie?" asked  
the boy's father.

"He's worried over his studies. He has an  
example that says if he has \$10, and pays  
fifty cents for some potatoes, and seventy-five  
cents for a steak, and various sums for other  
things, how much will he have left?"

"Well, tell him not to bother. I'm not  
going to have the careless innocence of child-  
hood disturbed by any such useless trouble.  
It'll be time enough for him to face the awful  
problems of life when he grows up and has  
grocery bills of his own."—Washington Star.

## HER MODEST WANTS

"Is there anything you want?" asked the  
butcher of the little girl with the soulful eyes  
and fawn-like air.

"Oh, yes, sir," lisped the little angel, tim-  
idly. "I want a sealskin sack, and a dia-  
mond ring, and a trotting-horse, and a steam  
yacht, and a foreign nobleman, and a pug-  
dog, and a brownstone house, and a box at  
the opory, and lots of other things; but all  
ma wants is ten cents' worth of bologna  
sausage for dinner, and won't you please trust  
her for it till Saturday night?"—Judge.

## MR. STAYBOLT'S PHILOSOPHY

"We may at first," said Mr. Staybolt, "be  
judged by our peculiarities; but in the course  
of time we are pretty sure to be estimated  
according to our merits, the peculiarities he-  
ing lost sight of altogether or counted as such  
only. Hence, it behooves us not to waste too  
much time on the gargoyles, but to hump our-  
selves mostly over a firm and solid structure."

## GLINTS FROM OUR EXCHANGES

A silver tongue and a brass cheek, well  
worked together, often produce "tin."

To please a man get him to talk about him-  
self; to please a woman get her to talk  
about her neighbors.

Doubtless old Lot thought that his wife was  
the salt of the earth when he married her,  
and he must have been lonesome at night  
without his pillar.

When you see an advertisement offering  
a reward for the return of a lost article,  
and no questions asked, you can bet the  
advertiser is not a woman.

If Nero had been a cornet-player instead of  
a fiddler it is probable that the Romans  
would have made a hot time in the old town  
before Nero got a chance.

Jones—"Why are you praying for rain?"

Brown—"I had my roof fixed to-day, and I  
want to see if it's all right before I pay for it."  
—New York Truth.

Mike—"Ut's twins, Pat; wau hboy an' wan  
gur-rl."

His brother—"Begorra, thin am Oi an un-  
cle or an aunt, Oi dunno?"

"No, dear," said a mother to her sick child,  
"the doctor says I mustn't read to you."

"Then, mama," begged the little one,  
"won't you please read to yourself out loud?"

"I see," said the gipsy, "a dark woman  
who will cause you trouble in money mat-  
ters."

"Great heavens!" murmured Chollie, "is  
that washerwoman going to hold my wash-  
ing for wansom again?"

A dairy maid a diary kept,

And she kept it neatly, very;

And the diary that she kept, she kept

The while she kept the dairy.

For the dairy diary that she kept

She kept in the dairy gaily.

This dainty, dilligent, dairy maid

Kept the dairy diary daily.

## THE NEW ISSUE IN TEMPERANCE

"WHISKY MEDICINES"—THE VOICE, THE LEAD-  
ING TEMPERANCE PAPER, SOUNDS THE  
CALL TO A NEW CRUSADE IN THE  
FOLLOWING ARTICLE—"AN-  
OTHER HEAD ON THE  
HYDRA."

"It is time attention was drawn to a form  
of alcoholic traffic that seems to have been  
overlooked by those engaged in the crusade  
against the rum power. If, as is believed  
and taught, alcohol is most dangerous when  
it fights in ambush, if it is most to be  
dreaded when it finds its first entrance to  
the system in the pleasant sauces and dishes  
of the home, then the form of alcoholic  
traffic in question is doubly dangerous, for it  
comes in the guise of medicine and attacks  
a system prepared by weakness to easily  
surrender to the assault. In many

## PATENT MEDICINES

which are largely consumed throughout the  
country, by all classes of people, there is  
a percentage of alcohol which puts them on  
a level with beer, rum and whisky as intox-  
icants. It is the smallness only of the dose  
prescribed which prevents a prompt recog-  
nition of the intoxicating effects of these  
so-called medicines by those who use them.

"It is safe to affirm that they are.

## MEDICINES IN NAME ONLY.

Their chief value lies in their alcoholic effect  
as a stimulant. In fact, those who know,  
attribute the benefits ascribed to this class  
of medicines wholly to the stimulative effect  
of the alcohol they contain. They are used  
largely by persons not in the habit of drink-  
ing liquors, and the little dose taken three  
or four times a day is as stimulating to  
these people as his regular 'finger' of 'bit-  
ters' is to the regular liquor-drinker.

## WHAT CAN BE DONE?

"What ought to be done at least is to  
compel every patent-medicine manufacturer  
to put on the wrapper of his bottle the quan-  
tity of alcohol it contains. That would at  
least leave people to exercise their own judg-  
ment. More than that, no paper truly inter-  
ested in temperance reform should print the  
advertisement of any alcoholic medicine. It  
should be the duty of every temperance or-  
ganization and branch in the country to look  
into this question, agitate it, and deal with  
the facts just as earnestly and as honestly  
as other facts have been dealt with."

Appreciating the gravity of the issue  
raised by the strong statement of facts made  
in the foregoing article, we wish to call gen-  
eral attention to the fact that Dr. Pierce's  
Golden Medical Discovery and Dr. Pierce's  
Favorite Prescription contain

NO ALCOHOL, NO WHISKY, NO INTOXICANT  
OF ANY KIND.

These medicines are equally free from opium  
and other narcotics.

They are in the strictest meaning of the  
words, temperance medicines. Of no other  
medicine, put up especially for woman's use  
can it be truthfully affirmed, as of Dr.  
Pierce's Favorite Prescription, that it con-  
tains neither alcohol nor opium or other  
narcotic in any form.

While the negative features of Dr. Pierce's  
medicines may only interest some of the  
readers of this article, the positive features  
of these medicines must be of interest to  
every one. The great value of "Golden Med-  
ical Discovery" in the cure of diseased or  
deranged conditions of the stomach and di-  
gestive and nutritive organs is testified to  
by tens of thousands who have found health  
and healing in this great remedy. The "Dis-  
covery" increases the action of the blood  
making glands, and by curing the diseases  
which corrupt and cripple the stomach and  
digestive and nutritive organs, it enables a  
full and pure supply of blood to be sent to  
every part of the body.

## WOMEN KNOW ITS WORTH.

Women who are always appreciative of  
benefits, have been especially appreciative of  
the benefits following the use of Dr. Pierce's  
Favorite Prescription. Its wonderful cures  
of irregularities, inflammations, ulcerations,  
and female troubles, have caused women to  
name it "that God-send to women." It is  
entitled to wear the "blue ribbon" of merit  
as well as the blue ribbon of temperance.

## THE BIBLE OF THE BODY.

Perhaps no greater gift was ever offered  
than the People's Common Sense Medical Ad-  
viser. It contains 1008 pages, and has over 700  
illustrations, and is the life work of its author,  
Dr. R. V. Pierce, chief consulting physician  
to the Invalids' Hotel and Surgical Institute,  
Buffalo, N. Y. This book has been well  
called "The Bible of the Body." It is to  
the body what the Bible is to the soul, "a

lamp unto the feet and a light unto the  
path." It deals with the great questions of  
physical life so simply that all may under-  
stand and so purely that it is essentially the  
one medical work for the home library. The  
book is published in two forms, one bound  
in paper-covers, and the other in strong cloth  
binding. Send 21 one-cent stamps for the  
paper edition to cover expense of mailing  
only, or 31 stamps for the cloth bound edi-  
tion. Address Book Department, World's  
Dispensary Medical Association, Buffalo,  
N. Y.

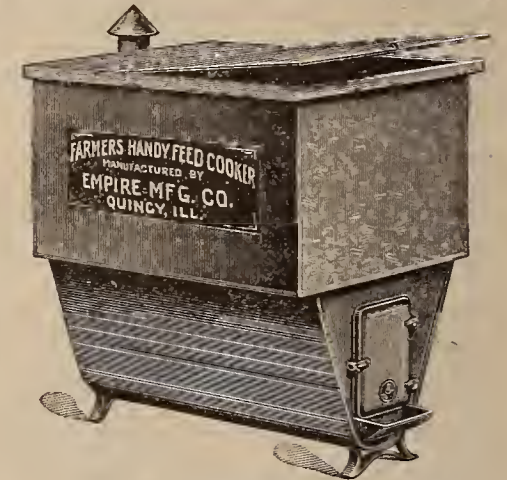
## HOW TWO-CENT FARE WILL AFFECT BUSINESS

Notwithstanding the continual increase in ex-  
penditures for improvements demanded by this  
progressive age, there has not been a perceptible  
increase in the net revenue collected by railways.  
On the other hand it has required careful finan-  
ciating and shrewd business tact to carry on the  
business successfully, particularly in recent years  
when depression in trade has affected business  
generally. It will be lamentable, indeed, if the  
Legislature enacts a law compelling railways to  
make passenger fares two cents per mile and  
thereby strangle an industry which gives employ-  
ment to thousands of citizens and which annually  
pays into the State funds an enormous amount of  
money.

A two-cent fare law cannot result otherwise. If  
railway profits are now at a low ebb, a compulsory  
reduction in revenue will sink them still deeper.  
Less revenue will necessitate the curtailing of ex-  
penses which will naturally affect the list of  
employees, number of trains and standard of ser-  
vice. Improvements will not go on, and the salary  
list will be shortened. Nearly every railway city,  
town and hamlet in the State has one or more  
railway employees in its population, and one or  
more families dependent upon the pay-car of some  
railway. Less revenue for the railway means the  
disbursement of less money through employees.  
The effect will be felt on all sides; decreased sal-  
aries and idle men will lessen the demand for  
various articles and an era of business stagnation  
will result.

## FARMER'S HANDY FEED COOKER

Reader's attention is called to this device, which  
is sold at \$12.50 for 50-gallon capacity. By feeding  
poultry and animals cooked food during winter at  
least one third of the feed is saved; also having



stock in a healthy condition, preventing hog chol-  
era among your hogs and insuring the hens laying  
freely during the winter months. On application  
to the Empire Manufacturing Co., Quincy, Ill., a  
catalogue giving full description may be obtained.  
They are made in all sizes.

## FREE HOMES IN WESTERN FLORIDA

There are about 1,000,000 acres of Government  
land in Northwest Florida, subject to homestead  
entry, and about half as much again of railroad  
lands for sale at very low rates. These lands are  
on or near the line of the Louisville & Nashville  
Railroad, and Mr. R. J. Wearyss, General Land  
Commissioner, Pensacola, will be glad to write  
you all about them. If you wish to go down and  
look at them, the Louisville & Nashville Railroad  
provides the way and the opportunity on the first  
and third Tuesday of each month, with excursions  
at only \$2 over one fare for round-trip tickets.  
Write Mr. C. P. Atmore, General Passenger Agent,  
Louisville, Kentucky, for particulars.

## GOOD WINTER READING

For farmers in the Eastern States is now being  
distributed by the Chicago, Milwaukee & St. Paul  
Ry., free of charge to those who will send their  
address to H. F. Hunter, Immigration Agent for  
South Dakota, Room 565, Old Colony Building,  
Chicago, Ill.

The finely illustrated pamphlet, "The Sunshine  
State," and other publications of interest to all  
seeking New Homes in the most fertile section of  
the West will serve to entertain and instruct every  
farmer during the long evenings of the winter  
months. Remember, there is no charge—address  
as above.

## CONSUMPTION CURED

An old physician, retired from practice, had placed  
in his hands by an East Indian missionary the formula  
of a simple vegetable remedy for the speedy and per-  
manent cure of Consumption, Bronchitis, Catarrh,  
Asthma and all Throat and Lung Affections; also a pos-  
itive and radical cure for Nervous Debility and all Ner-  
vous Complaints. Having tested its wonderful curative  
powers in thousands of cases, and desiring to relieve  
human suffering, I will send free of charge to all who  
wish it, this recipe, in German, French or English, with  
full directions for preparing and using. Sent by mail,  
by addressing, with stamp, naming this paper, W. A.  
NORRIS, 820 Powers' Block, Rochester, N. Y.

### BIG FORTUNES FROM LITTLE INVENTIONS

It has become almost an axiom with the majority that larger fortunes are to be raised from some simple invention than from difficult and expensive inventions that involve a great outlay of money to manufacture. This is to a certain extent true. A certain American patent for fastening kid-gloves has yielded a fortune of several hundred thousand dollars for its fortunate owner, and the inventor of a collar-clasp enjoys a \$20,000 royalty a year as the reward for his endeavor. A new kind of sleeve-button has made \$50,000 in five years for its patentee, and the simple twisting of safety-pins in such a way that there is no possible danger of the point sticking in the child promises to enrich its owner beyond any of his early dreams of wealth. A man one day turned a piece of wire so as to hold a cork more securely in a bottle, and forthwith somebody saw a brilliant idea, and patented the modern wire stopple-holder, which is now used annually on several million bottles. The accidental bending of a hair-pin by a woman to prevent it from sliding out of her hair also easily produced a fortune for her husband, who immediately saw the possibilities of a crinkled hair-pin for women.

Instances could be multiplied indefinitely of large fortunes being made from small inventions, but fortunately, for those inventors who make a life-study of intricate problems of mechanics, and disdain to waste their talents upon trivial, popular articles of the day, there is often also ample reward held in store for the products that take years to produce, and which revolutionize existing methods of industry and mechanics. Edison has reaped honors and riches of a princely character from his discoveries; McCormick has realized in his reaper the fortune of a millionaire; the Corliss engine brought honors and decorations to its inventor, and enabled him to amass a great fortune in a few years; Prof. Bell found in his telephone not only the consummation of his early hopes and ambitions, but a substantial pecuniary reward; Harveyized steel armor has become synonymous with the inventor's name, and it brings an annual income of huge proportions to its discoverer; Elias Howe, the inventor of the sewing-machine, realized over \$2,000,000 from his inventions; and Nikola Tesla, though still young and rich in promises, finds an abundance of money in his work.—George Ethelbert Walsh, in Cassier's Magazine.

### SHE WANTED BARE FACTS

The mayor of a far western city once received the following letter of inquiry:

"Kind and respected Sir:—I see in a paper that a man named John Sipes was attacked an et up by a bare whose kubs he was tryin to git when the she bare come up and stopt him by eatin him in the mountaines near your town.

"What I want to know is, did it kill him or was he only partly et up and is he from this place and all about the bare. I don't know but what he is a distant husband of mine.

"My first husband was of that name and I supposed he was killed in the war, but the name of the man the bare et being the same I thought it might be him after all and I ought to know it if he wasn't killed either in the war or by the bare, for I have been married twice an there ought to be divorce papers got out by him or me if the bare did not eat him all up. If it is him, you will know it by his having six toes on the left foot.

"He also has a spread eagle tattooed in his front chest and a ankor on his right arm wich you will know him by if the bare did not eat up these sines of its being him.

"Find out all you kin about him without his knowing what it is for. That is, if the bare did not eat him all up. If it did, I don't see as you can do anything and you needn't take no trouble. Please ancer back.

"P. S.—Was the bare killed? Also was he married again and did he leave any propty wuth me laying claims to?"—Christian Endeavor World.

### NEW USES OF GLASS

Glass is now often used instead of gold as a material for filling decayed teeth. It is far less conspicuous than the yellow metal. Of course, it is not ordinary glass, but is prepared by some new patented process which renders it soft and malleable. Glass, too, will soon be extensively used for church-bells. It can be toughened so that there is no risk of it cracking, and the tone is said to be beyond anything yet invented—perfect, soft and sonorous.

# CLARA BARTON

### TO THE PUBLIC:

I have been for some time writing the story of all that I have seen and experienced in connection with my "Red Cross" labors, and am now rapidly completing the work.

To answer any inquiries, will state that I have not written nor contributed to any other work, nor do I intend to, and the use of my name in any other book, magazine, or periodical, is unauthorized.

In order that subscribers may be certain that they are obtaining my book, they must be sure that the book bears on the Title Page the imprint of "The American National Red Cross," a fac-simile of which imprint is shown with my signature to this letter.

A copy of this letter, duly countersigned by the manager in each locality, will be inserted in front of each Prospectus, and agents are specially requested to have each purchaser read the same.

Yours respectfully,

CLARA BARTON

This Imprint is on the title page of each copy of my book,

New York, October 31, 1898.

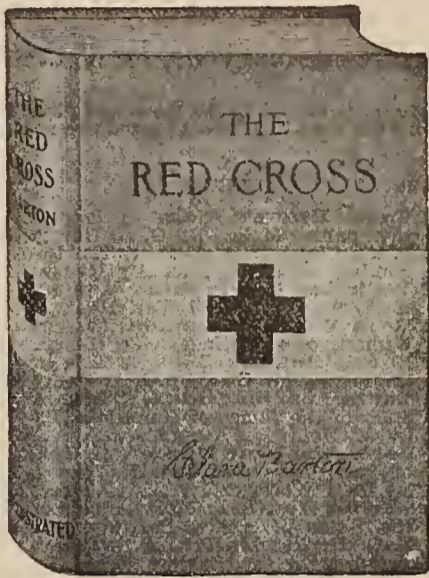
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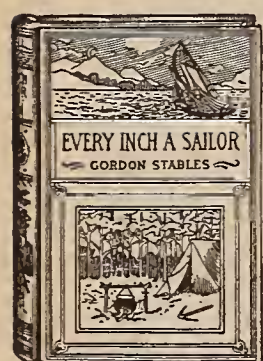
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# For Club-raisers and Subscribers

## HOW TO GET UP CLUBS AND GET PREMIUMS FREE

Any one can be a club-raiser, and every one ought to be, since our terms are so very liberal and our rewards so generous. No one should renew without at least sending one other name, which would make a club of two, entitling the club-raiser to his choice of any one of the premiums given free for a club of two. Let us illustrate how easy it is to get up a club of two:

A and B are neighbors. If A sends B's subscription to FARM AND FIRESIDE with his own, at 30 cents each, it makes a club of two, which entitles A (the club-raiser) to his choice of any one of the premiums given free for a club of two; as, the Set of Six Silver-plated Nut-picks.

Now, if a member of a club wants a premium he has the right to order it in connection with his subscription, and the name can be counted in a club just the same. To illustrate:

If, in the above case, A takes the new book, "Photographic Panorama of Our New Possessions," with his subscription, he pays 40 cents; if B takes

"Gleason's Horse Book" with his subscription, he pays 35 cents. This makes a club of two subscribers. Thus, B gets "Gleason's Horse Book" as a premium because he pays for it, A gets the book, "Photographic Panorama of Our New Possessions," because he pays for it, and, in addition, A gets the Set of Nut-picks free as a reward for getting up the club of two; and so on for other premiums and larger clubs.

Paid-in-advance subscribers may join in a club, and their time will be advanced one year. Premiums and subscriptions will be sent to different addresses when so ordered. The premiums are not sold alone.

We want club-raisers to get renewals as well as new subscribers. We will send to club-raisers our list of subscribers at their post-offices, so they can call and get renewals. Renewals count in clubs.

### GIFT CARD

When one wishes to present a friend with a year's subscription to the FARM AND FIRESIDE we have a

"Gift" card which we will, on request, mail to the receiver of the gift. On the card we will write the names of the giver and receiver. The wording will be as follows: "FARM AND FIRESIDE one year to \_\_\_\_\_ Compliments of \_\_\_\_\_" It is twenty-four presents in one.

If you want to present two subscriptions it makes a club of two, which entitles you to any one of the premiums given free for a club of two, as the Tea-spoons; and so on for more names and other premiums.

### CLUB-RAISER'S OUTFIT FREE

We want to send to every one our complete "Instructions How to Get Up Clubs" and Club-raiser's Outfit. Please write for it. It is free to all.

Club-raisers should send on the subscriptions and money as fast as they take orders, and the number sent each time will be added to their list. But always say, "Add to my club list." Club-raisers may choose their premiums when their list is completed.

## Additional Premiums and Prizes for Club-raisers and Subscribers

Below are listed a number of premiums which are not advertised in this number for want of space. But by turning to the December 1st number of the Farm and Fireside or to our Premium Catalogue a full and complete description of most of them will be found. We will gladly send our Premium Catalogue to any one upon request.

(Any of the following offers may be accepted and the name can be counted in a club.)

Model Steam-engine, and Farm and Fireside 1 Year, = \$1.75  
This Engine given free for a club of 10 yearly subscribers to Farm and Fireside; or for a club of 5 and \$1 cash. Expressage paid by us.

Genuine Oxford Bible, and Farm and Fireside 1 Year, = 2.25  
This Bible (without patent index) given free for a club of 12 yearly subscribers to Farm and Fireside. The Bible with patent index given free for a club of 14. Name in gold for 25 cents or two extra names in the club. The finest premium Bible ever offered for such a small club.

Scholars' School Set, and Farm and Fireside 1 Year, = .60  
This Scholars' School Set given free for a club of 3 yearly subscribers to Farm and Fireside. Contains pencils, pens, etc., worth \$1 at retail.

6 Silver-plated Nut-picks, and Farm and Fireside 1 Year, .50  
This set of Six Silver-plated Nut-picks, in cloth-lined box, given free for a club of 2 yearly subscribers to Farm and Fireside.

Bookcase and Secretary, and Farm and Fireside 1 Year, 8.00  
This handsome piece of furniture given free for a club of 40 yearly subscribers to Farm and Fireside. Durably made of polished oak. The Bookcase must be sent by freight, the charges to be paid by the receiver.

Ladies' Seal Pocketbook, and Farm and Fireside 1 Year, 1.15  
This fine Pocketbook given free for a club of 6 yearly subscribers to Farm and Fireside. Name in gold for 25 cents or two extra names.

Fine Fountain-pen, and Farm and Fireside 1 Year, = = 1.00  
This Fountain-pen given free for a club of 5 yearly subscribers to Farm and Fireside. Has 14 karat gold point and otherwise same as those sold in stores for \$2. Has chased barrel, length 7 inches, box and filler.

Nickel-plated Scissors, and Farm and Fireside 1 Year, = .70  
This pair of fine seven-inch Scissors given free for a club of 3 yearly subscribers to Farm and Fireside. Tempered, ground and nickel-plated.

Boys' or Men's Pocket-knife, and Farm and Fireside 1 Year, .80  
This Pocket-knife given free for a club of 5 yearly subscribers to Farm and Fireside. Brass-lined and buffalo-horn handles. Has two blades.

Samantha Among the Brethren, and Farm and Fireside 1 Year, .35

Samantha at Saratoga, and Farm and Fireside 1 Year, .35  
Both of these Samantha books were written by Josiah Allen's Wife, and are very funny. They have over 200 comic illustrations. Heavy paper binding.

NOTE Thirty cents is the clubbing price for yearly subscriptions to Farm and Fireside without a premium to the subscriber. But members of clubs may accept any of our premium offers and their names can be counted in clubs. RENEWALS and new names, including a club-raiser's own subscription, can be counted in clubs.

Girls' Solid Silver Watch, and Farm and Fireside 1 Year, 5.60  
This Watch given free for a club of 28 yearly subscribers to Farm and Fire-side. Has seven-jeweled American movement. A beautiful chatelain watch. For full description of this and twelve other gold and silver watches see December 1st Farm and Fireside or in Premium Catalogue.

Pearl-handled Gold Pen, and Farm and Fireside 1 Year, \$1.00  
This Pearl-handled Gold Pen given free for a club of 5 yearly subscribers to Farm and Fireside. A handsome present for a lady.

People's Atlas, and Farm and Fireside 1 Year, = = = .40  
The People's Atlas contains 128 pages, each page 11 inches wide by 14 inches long, and over 200 maps and illustrations. Heavy paper binding.

Life of Lincoln, and Farm and Fireside 1 Year, = = = .45  
The Life of Lincoln contains 320 pages, each page 7 inches wide and 9 1/2 inches long, and over 150 illustrations. Heavy paper binding.

Life of Washington, and Farm and Fireside 1 Year, = .45  
The Life of Washington contains 332 pages, each page 7 inches wide by 9 1/2 inches long, and over 100 illustrations. Heavy paper binding.

Arts of Beauty, and Farm and Fireside 1 Year, = = = .35  
The Arts of Beauty is the only book written by Shirley Dare, the writer on subjects pertaining to a lady's toilet. 256 pages. Heavy paper binding.

Giant Almanac for 1899, and Farm and Fireside 1 Year, .40  
Our Giant Almanac for 1899 will contain over 500 pages, each page 6 by 8 1/2 inches. It is a complete book of statistics up-to-date. Heavy paper binding.

The Standard Cook Book, and Farm and Fireside 1 Year, .35  
The Standard Cook Book contains 1,200 recipes, 186 illustrations, 320 pages, each page 5 1/2 by 8 inches. Over 500,000 copies sold. Lithographed cover.

Repeating Air-rifle, and Farm and Fireside 1 Year, = 1.50  
This Air-rifle given free for a club of 6 yearly subscribers to Farm and Fire-side. Shoots three hundred times without reloading. Must be sent by express, charges to be paid by the receiver.

Christ Before Pilate, and Farm and Fireside 1 Year, = .40  
Christ Before Pilate is a picture lithographed in 14 colors, and an exact copy of the original, which sold for \$100,000. Size, 21 by 26 inches.

## A Gigantic Clubbing Offer=\$4.50 Worth for \$1

Woman's Home Companion is our dollar-a-year journal. It is printed on fine paper and profusely illustrated. It gives 32 to 40 pages a month (the Christmas number will have 50 pages), each page 11 by 16 inches, and a new and beautiful cover every issue. Its editors and contributors are the most popular American writers; in short, it is an ideal family magazine. For free sample copy address Woman's Home Companion, Springfield, Ohio. Regular price \$1.00 a year. See trial subscription offer below.

PHOTOGRAPHIC PANORAMA OF OUR NEW POSSESSIONS, Cheap at	\$1.00 a copy
GLEASON'S HORSE BOOK, Agents' Edition Sold for	= = = 2.00 a copy
FARM AND FIRESIDE, The Biggest Farm Paper, Cheap at	= = = .50 a year
WOMAN'S HOME COMPANION, An Ideal Magazine, Regular Price	= = = 1.00 a year
Grand total for all four,	= = = \$4.50

We will send Farm and Fireside and Woman's Home Companion one year and the TWO premiums for the Special Price of \$1.00.

## ALL 4 FOR ONE DOLLAR

When this offer is accepted it may be counted as ONE name in a club.

In this "All 4 for \$1" offer substitutes for the premiums named may be chosen from "People's Atlas," "Giant Almanac for 1899," "Life of Washington," "Life of Lincoln," "Universal Dictionary," "Standard Cook Book," "Samantha at Saratoga," "Samantha Among the Brethren" and "The Prodigal Son." In this "All 4 for \$1" offer no more than two premiums can be taken.

Postage or expressage on premiums paid by us except when otherwise specified in advertisement

Address FARM AND FIRESIDE, Springfield, Ohio

### "LIKE CAT, LIKE MISTRESS"

Stimulated by the Crystal Palace cat show and such like institutions there are probably an increasing number of people who take an interest in cat life. It is to such that Mr. Louis Wain appeals in his article on character in cats in "Casell's Magazine" for November.

"Cats are like children," he says. "Educate them properly and you can do with them and their characters even as you will. One of the first things that impressed itself on my mind, on going round to cat shows as judge, spectator or artist, was the extraordinary difference that exists in the characters of cats coming from different parts of the country. Indeed, the effect that a crowded exhibition and its surroundings have upon different cats is really very strange. Most of those cats which at home are rarely drawn out of themselves, and which you see, in an ordinary way, under one or two conditions of expression, immediately develop a new expression, and this typifies the effect home life has upon them.

"For instance, a cat which has been treated by its master or mistress very lovingly, and has, in normal circumstances, seen a number of people who have praised it and petted it and stroked it a great deal, will exhibit an entirely new, smug, contented and happy expression when it comes before the public. On the other hand, the animal that has lived a life of ease, seeing nobody and nothing beyond its mistress, will exhibit the most striking characteristics of its mistress. Thus, if the character of the woman be, in the main, a sulky or a sunny one, the effect of the sudden change upon the cat's life will be to bring out in the cat a sulky or a snappy disposition also. Another cat will, perhaps, show itself in the highest degree suspicious, taking after its master or mistress again; while a fourth, that has had to fight his way, will quarrel and rush at everything; and a fifth, that has been allowed to roam the country, will ruffle up his straw, get underneath its bed to hide right out of sight, and nothing but force will move it."—*Pall Mall Gazette.*

### PROFITS OF RAILWAYS

The report of the Interstate Commerce Commission shows that last year the railways of the United States carried over 13,000,000,000 passengers one mile. They also carried 95,000,000,000 tons of freight one mile. The total amount paid in dividends on stock was \$87,603,371—call it \$88,000,000. Of the total earnings of the railways about seventy per cent came from freight service and thirty per cent from passenger service. Let us assume, then, that of the \$88,000,000 paid in dividends, seventy per cent, or \$61,600,000, was profit on freight service and \$26,400,000 was profit on passenger service. Let us drop fractions and call it \$62,000,000 from freight and \$26,000,000 from passengers. By dividing the passenger profit into the number of passengers carried (13,000,000,000) we find that the railways had to carry a passenger 500 miles in order to earn one dollar of profit—or five miles to earn one cent. Their average profit, therefore, was less than two tenths of one cent for carrying a passenger (and his baggage) one mile.

By dividing the freight profit into the freight mileage (95,000,000,000) we find that the railways had to carry one ton of freight 1,530 miles in order to earn one dollar, or over fifteen miles to earn one cent. The average profit, therefore, was less than one fifteenth of a cent for carrying a ton of freight (besides loading and unloading it) one mile.

### A BIT OF MONTANA HISTORY

We at first pronounced the name of Helena, Montana, after the fashion of the people down in Helena, Arkansas, in those days. I don't remember how the name was selected, but the accent on the second syllable seemed to take better because it rhymed with galena and some other words of the same fashion.

A curious incident is connected with the changing of the pronunciation. There was a fellow here, who ran a hack about town, who had painted in big letters on the side of it the name "Hellena." It was only a misspelled word, but it was naturally pronounced with the accent on the first syllable, and that gradually, during the year and a half that the hack ran around the camp, became a habit with men who had learned to pronounce the word differently in school. It has been pronounced with the accent on the first syllable ever since.—*Helena Independent.*

### MACHINISTS' NOMENCLATURE

There are, perhaps, few except those who have had much translating of technical literature from English into foreign languages who have any idea of how many absolutely meaningless words we have drawn from the animal kingdom, and which very seldom can be rendered in their technical sense by their actual equivalent.

Thus the machinist employs a dog on his lathe; he takes a hog cut, if the tool will stand it; the castings are made from pigs of iron, which in turn were fed from a sow. Work is set upon a horse or buck, and punched or bent by a convenient bear; screws are turned by a monkey-wrench. This, however, got its name from the inventor, Thomas Monkey, of Bordertown, New York. Hoisting is done by a crab, and a convenient cat is a part of the outfit of a shop crane, and a kit of tools is ever at hand. A crow helps to straighten work, a jack to lift it, a mule pulley aids in driving machinery that a donkey engine turns. A fish connects parts end to end, or strengthens a broken beam; shells are used all over; a worm does powerful but quiet work. A cock shuts off the water; one kind of a ram raises it and another does heavy work. A printing-press has a fly; the first locomotives had a grasshopper valve motion and drive, and butterfly valves are common. Herring-bone gears are used by the best builders; turtles on printing-press cylinders, and fly-wheels are running all over the world. In drilling, even an old man is called into service, and doctors prevent faulty lathe work.

But from the human body we borrow the name of nearly every principal part, as head, neck and chest; arm, leg and toe; heel, sole and foot; elbow, shoulder, wrist and knee; knuckle and finger; rib and diaphragm; eye, ear, nose and cheek; mouth, tongue and tooth; throat and gullet; back, side and belly.

From the minor animals also we get snout and horn, tail and claw, wing and feather, quill and spur, fin and scale.—*R. Grimshaw, in Engineers' Review.*

### ENGLISH SWORDS

The presentation of a sword to Lord Kitchener invests for the moment the swords generally of our warriors with a certain special interest. It is useful to know, perhaps, that the average price of a linesman's sword is five guineas, while a guardsman's costs seven pounds and ten shillings. The cavalry sword is thirty-four and one half inches long, and weighs two pounds nine ounces. It is an admittedly imperfect sword, as it is meant to combine cutting and thrusting, and so is slightly curved. The wit of man has not yet devised a sword which will be perfect as both a thrusting and a cutting weapon. The best cutting sword should be heavy, and curved to allow it to be drawn as you would a knife through a piece of meat. Our Indian cavalry have the curved swords, and our horsemen used them in the Peninsular war. Experience has proved, however, that a slight punctured wound is much more deadly than a severe cut. An army surgeon who had had eleven years' experience in India once stated that while he had seen the most trifling punctured wounds terminate fatally, the most frightful cuts were cured. Now the best thrusting sword should be light, narrow and straight, not heavy, broad and curved. Our sword is neither one thing nor the other, but, like so much else in this empire of ours, a compromise. It is slightly curved toward the point. Still, on the whole, it seems to have served pretty well at the Omdurman charge. The officers' swords, it may be mentioned, are generally made of the very best steel obtainable; namely, ingot cast-steel. The metal, however, does not affect the cost appreciably. What enhances that is the workmanship, which may be carried to a very high artistic point, as the Sirdar's sword proves.—*London News.*

### FUGITIVE COLORS OF GEMS

The colors of precious stones are not permanent in the light. To give a chemical and physical explanation of this is difficult; for, although chemical reactions in solid bodies have been proved, one does not expect them to occur in the exceedingly hard minerals concerned. A ruby which had been left for two years in a light show-window was found to be considerably lighter after this time had elapsed than a stone, previously of exactly the same color, which had been kept in the dark. Similar results were observed with emeralds and sapphires. Still more rapid is the action of light on the less expensive stones. Garnet and topaz differ in that the former becomes dim and dull, while the latter only turns lighter.



A truck farmer, living in Owen, Indiana, describes an afflicted condition with which almost every one will sympathize. "I want to thank you," he writes, "for the good that Ripans Tabules have done me. I had been all run down for a year and could not build up on account of imperfect digestion and assimilation. I had tried various remedies without relief until I was thoroughly discouraged. My father, who had used the Tabules with good results, recommended them to me, but I had so little faith in anything, that he had to insist several times before I would try them. Finally I got a package and my improvement was both rapid and sure from the first. I shall keep them on hand hereafter for emergencies, and shall take pleasure in recommending their use to any one who may be similarly afflicted."

A new style packet containing TEN RIPANS TABULES in a paper carton (without glass) is now for sale at some drug stores—FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (120 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—or a single carton (TEN TABULES) will be sent for five cents.

## ENTERPRISE Meat and Food Choppers

Twenty-eight sizes and styles, \$1.50 to \$275.00

No. 5, Clamps to table,	Price, \$2.00
No. 10, " " "	" 3.00
No. 20, " " "	" 5.00
No. 12, Screws on table,	" 2.50
No. 22, " " "	" 4.00
No. 32, " " "	" 6.00



*Farm and Fireside says:*  
"It is the only Meat Chopper we ever saw that we would give house room. It has proved such a very useful machine that we want our readers to enjoy its benefits with us."

Our trade-mark "Enterprise" is on every machine. Send 4c. in stamps for the *Enterprising Housekeeper*—200 recipes.

THE ENTERPRISE MFG. CO. OF PA. THIRD & DAUPHIN STS. PHILADELPHIA.



FOR CHOPPING Sausage and Mince Meat, Hamburg Steak for Dyspeptics, Tripe, Hoghead Cheese, Suet, Godfish, Coconut, Clams, etc.

For sale by the Hardware Trade. Catalogue Mailed Free.

*American Agriculturist says:*  
"We have given this Meat Chopper a thorough trial with most satisfactory results. They excel anything of the kind made in either hemisphere."

## An Opportunity

To Learn of the General Resources and Conditions of

## California

A semi-monthly paper, in which is given current information concerning fruit land, its market price, adaptation, cost of orchard planting and cultivation, plans by which orchards are developed for non-resident owners, profits realized, methods of harvesting and selling fruit, poultry industry, cost of building material, tax rates, cost of general commodities, climate as it affects health and vegetation, rain fall and temperature, freight and passenger rates to and from California, together with much other news of interest to those looking to California for a home or an investment, will upon request go to you if you will pay the postage at the rate of one cent per issue. Not more than twenty-four cents, which pays for twenty-four numbers, will be accepted.

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650 POUND MELONS AND 5 POUND BUNCHES OF GRAPES AT MAYWOOD

**THE WHOLE STORY** of successful incubating and brooding is told in our new 228-page catalogue. Full description of the best machines to use for the purpose. Cuts and instructions for building modern, economical poultry houses; poultry supplies and cuts and prices of leading varieties of pedigree poultry; prices on eggs for hatching, etc. Full of valuable information to every man or woman who keeps hens. We send it to any address on receipt of 10 cents. RELIABLE INCUBATOR AND BROODER CO. Box B 41, Quincy, Ills.

# Many Views of Strange Scenes...

PREMIUM NO. 43

The photographic camera tells no stories. It does not exaggerate, neither does it leave out anything. The photograph gives it to you as it would look if seen through your own eyes. Our new book of photographic views contains over 300 engravings which are exact reproductions of photographs. They are true to life and tell their own story at a glance.

Call your friends' and neighbors' attention to their opportunity of getting this interesting book for almost nothing.



## A Photographic Panorama of Our New Possessions.....

By this book you bring into your home typical scenes from Cuba, Porto Rico, Hawaii and the Philippines which will give your children a better idea of these countries than can be had through any other source. They here see the people just as they are, the kinds of houses they live in, and the variety of trees and plants which grow there. They have before them scenes in the country and cities as they exist at this very moment. In this book are scenes of army and navy life, and other views which give one a better understanding of the recent Spanish-American war.



Each page of our new book of photographic views measures 8 inches wide by 11 1/4 inches long. The pictures on pages 1, 2, 23 and 24 are taken from the book, and give a hint of its contents. It will bring joy to every home, and should be in every school-room.

We expect the book will be ready for delivery about Christmas. We are pushing the work upon it day and night, to have it ready at the earliest possible date. Orders should be sent at once, for the orders which arrive first will be the first filled.

In the book the illustrations will be very much clearer and plainer, because they will be printed on costly polished paper with slower presses.

**This Grand Book, and This Paper One Year, 40c.**

(When this offer is accepted the name may be counted in a club.)





## Our New Book...

Premium No. 43

Destiny has suddenly made the United States an empire. The fortunes of war have added to her care and ownership rich tropical islands in the Atlantic and Pacific oceans. They are Uncle Sam's, yet they are strangers, for want of accurate pictorial knowledge of them. This want is fully supplied by our new book of photographic views. Turning its pages is like the passing of a grand panorama. Its realistic pictures present to the eyes beautiful and marvelous sights in those fertile island countries. Each page of the book is 8 in. wide by 11  $\frac{1}{4}$  in. long.



## Traveling by Photographs....

The next best thing to making a personal visit to strange scenes and countries is to have photographic pictures of the places. There are seventy millions of people in the United States who will never visit Cuba, Porto Rico, Hawaii or the Philippines; who did not get to visit the numerous camps of soldier boys; who were never on board a war-vessel, and who will never have a chance to see them except through photographic views.

## We Will Send This Book, and This Paper One Year, for Only 40 Cents

(When this offer is accepted the name may be counted in a club. Order the book by the premium number.)

It is as easy as play to get up clubs of subscribers for Farm and Fireside and this book at 40 cents. We give valuable premiums free as rewards for getting up clubs. See our premium offers elsewhere and in back numbers of Farm and Fireside. A club-raiser's outfit will be sent free of charge to any one on request.



The pictures on pages 1, 2, 23 and 24 are taken from our new book, "Photographic Panorama of Our New Possessions," and will give an idea of the hours of pleasure which can be had visiting these scenes by the aid of pictures. It will delight every member of every Farm and Fireside home.

In the book the illustrations will be very much clearer and plainer, because they will be printed on costly polished paper with slower presses.

